

1 UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF OHIO
3 EASTERN DIVISION

4 IN RE: NATIONAL)
5 PRESCRIPTION) MDL No. 2804
6 OPIATE LITIGATION)
7 _____) Case No.
8) 1:17-MD-2804
9)
10 THIS DOCUMENT RELATES) Hon. Dan A.
11 TO ALL CASES) Polster
12)

13 TUESDAY, APRIL 23, 2019

14 HIGHLY CONFIDENTIAL - SUBJECT TO FURTHER
15 CONFIDENTIALITY REVIEW

16 - - -

17 Videotaped deposition of Mark A.
18 Schumacher, M.D., Ph.D., held at the offices of
19 Morgan, Lewis & Bockius LLP, One Market,
20 Spear Street Tower, San Francisco,
21 California, commencing at 9:35 a.m., on the
22 above date, before Carrie A. Campbell,
23 Registered Diplomat Reporter and Certified
24 Realtime Reporter.

25 - - -

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VIDEOGRAPHER:

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(Exhibits attached to the deposition.)

1 VIDEOGRAPHER: We are now on
2 the record.

3 My name is David Kim. I'm a
4 videographer for Golkow Litigation
5 Services.

6 Today's date is April 23, 2019,
7 and the time is 9:35 a.m.

8 This video deposition is being
9 held in San Francisco, California, in
10 the matter of National Prescription
11 Opiate Litigation, MDL 2804, for the
12 US District Court for the Northern
13 District of Ohio, Eastern Division.

14 The deponent is Mark A.
15 Schumacher.

16 Will counsel please identify
17 themselves for the record.

18 MR. ERCOLE: Brian Ercole from
19 Morgan Lewis on behalf of the acquired
20 Actavis and Teva defendants.

21 MR. EHSAN: Houman Ehsan of
22 O'Melveny & Myers on behalf of the
23 Janssen defendants.

24 MR. TAM: Jonathan Tam from
25 Dechert for Purdue.

1 MR. LEVINE: Aaron Levine from
2 Arnold & Porter on behalf of Endo and
3 Par.

4 MS. DURFEE: Laura Jane Durfee
5 from Jones Day on behalf of Walmart.

6 MR. LAVELLE: John Lavelle from
7 Morgan Lewis on behalf of Rite Aid.

8 MR. SALIMBENE: Mike Salimbene
9 from Reed Smith for AmerisourceBergen
10 Drug Corporation.

11 MR. BREWER: Matt Brewer from
12 Bartlit Beck on behalf of Walgreens.

13 MR. DAVISON: William Davison
14 from Ropes & Gray on behalf of
15 Mallinckrodt, LLC, and SpecGx, LLC.

16 MR. KAWAMOTO: Dean Kawamoto,
17 Keller Rohrbach, on behalf of
18 plaintiffs.

19 MS. GAFFNEY: Alison Gaffney,
20 Keller Rohrbach, on behalf of the
21 plaintiffs.

22 MR. LOESER: Derek Loeser from
23 Keller Rohrbach on behalf of the
24 plaintiffs.

25 MR. STAMPFL: Karl Stampfl from

1 Kirkland & Ellis on behalf of Allergan
2 defendants.

3 MR. LEIGH: Daniel Leigh,
4 O'Melveny & Myers, on behalf of the
5 Janssen defendants.

6 MS. FUJIMOTO: Michelle
7 Fujimoto of Shook, Hardy & Bacon on
8 behalf of McKesson Corporation.

9 MR. MOONEY: Matt Mooney of
10 Williams & Connolly for Cardinal
11 Health.

12 MR. ERCOLE: How about the
13 folks on the phone?

14 MS. FINGER: Yeah, this is Anna
15 Finger at Locke Lord for the Henry
16 Schein defendants.

17 MR. ERCOLE: Anyone else on the
18 phone?

19 VIDEOGRAPHER: The court
20 reporter is Carrie Campbell and will
21 now swear in the witness.

22
23 MARK A. SCHUMACHER, M.D., Ph.D.,
24 of lawful age, having been first duly sworn
25 to tell the truth, the whole truth and

1 nothing but the truth, deposes and says on
2 behalf of the Defendants, as follows:

3

4 DIRECT EXAMINATION

5 QUESTIONS BY MR. ERCOLE:

6 Q. Good afternoon, Dr. Schumacher.

7 You've provided -- you've been
8 submitted as an expert in this case; is that
9 correct?

10 A. That is correct.

11 Q. Okay. And are you prepared to
12 give testimony today?

13 A. I am prepared.

14 Q. Okay. And have you had your
15 deposition taken before?

16 A. I've not in an expert case, no.

17 Q. Okay. Have you had it taken
18 before in another type of case?

19 A. In a -- yes, in a medical
20 malpractice for UCSF.

21 Q. You were not an expert in that
22 case?

23 A. No.

24 Q. Have you had your deposition
25 taken in other situations?

1 A. No.

2 Q. So let me just walk through a
3 couple of rules, if that works for you.

4 It's important to verbally
5 respond to the questions that I ask because
6 the court reporter needs to take down your
7 oral testimony. So head nods or some type of
8 gesture will not be picked up by the court
9 reporter.

10 Do you understand that?

11 A. Yes, I do.

12 Q. Okay. And another sort of rule
13 for the deposition is unless there is --
14 there are many instances where your counsel
15 may object to a question, and even if there
16 is an objection, unless your counsel tells
17 you not to answer -- instructs you not to
18 answer it -- unless you follow that
19 instruction, you'll have to answer the
20 question.

21 Do you understand that?

22 A. I understand.

23 Q. Another important rule is if I
24 ask a question that you do not understand,
25 please let me know, and I'll do my best to

1 rephrase it or reask it. But if I ask a
2 question and you respond, I'm going to
3 presume that you understood the content of
4 the question.

5 Do you understand that?

6 A. I understand your explanation,
7 yeah. Thank you.

8 Q. Do you understand that you are
9 under oath and that your testimony has the
10 same force and effect as if you were
11 testifying in court?

12 A. Yes, I understand that.

13 Q. Have you taken any medication
14 or anything else that would impact your
15 ability to testify truthfully and accurately
16 here today?

17 A. No, I have not.

18 Q. Okay. Anything that would
19 prevent you from testifying truthfully and
20 accurate here?

21 A. Not that I'm aware of.

22 Q. Sir, you have a -- looks like a
23 binder of materials in front of you?

24 A. That's correct.

25 Q. Is that correct?

1 And is that a binder of
2 materials that you brought into this
3 deposition?

4 A. That's correct.

5 MR. ERCOLE: I'd actually like
6 to mark that as Exhibit 1 if we can,
7 and then I'd like to make a copy of
8 that over the break.

9 THE WITNESS: That's fine.

10 (Schumacher Exhibit 1 marked
11 for identification.)

12 QUESTIONS BY MR. ERCOLE:

13 Q. And, sir, I know your counsel
14 just articulated, but I need to ask you:
15 What is Exhibit 1, to the best of your
16 recollection?

17 A. Sure. It contains my draft
18 report -- or the expert report. It also
19 includes exhibits provided by counsel as well
20 as materials considered, and finally a copy
21 of my curriculum vitae.

22 Q. Okay.

23 A. I believe -- yeah.

24 Q. And you referred to a draft
25 report.

1 What did you mean by that?

2 A. I misspoke. It is my expert
3 report.

4 Q. I believe from the initial set
5 of questions you have never been deposed as
6 an expert before; is that correct?

7 A. That is correct.

8 Q. Have you ever been proffered as
9 an expert in any case before?

10 A. What do you mean by that?

11 Q. Sure.

12 Have you ever attempted to
13 serve as an expert before in any type of
14 litigation?

15 A. No. No.

16 Q. So it stands to reason you've
17 never given, in any type of litigation, case
18 or proceeding, any type of expert opinion
19 before; is that correct?

20 A. That is correct.

21 It's unusual in that -- in that
22 regards, but this is a very important area of
23 concern of mine.

24 Q. So just to check off the box,
25 you've never given any expert opinion with

1 respect to pharmaceutical marketing before,
2 correct?

3 A. That's correct.

4 Q. Never given any expert opinion
5 with respect to pain management before,
6 correct?

7 MR. LOESER: Objection to form.

8 QUESTIONS BY MR. ERCOLE:

9 Q. You can answer the question.

10 A. I've been asked for my expert
11 opinion about pain management multiple times
12 as part of my role as medical director of
13 pain management at UCSF Medical Center, as
14 well as chief of the division of pain
15 medicine since 2010.

16 Q. You've never given any type of
17 expert opinion in any type of litigation case
18 with respect to pain management, correct?

19 A. That is correct.

20 Q. And you've never given any type
21 of expert opinion in any litigation case
22 concerning addiction, correct?

23 A. That is correct.

24 (Schumacher Exhibit 2 marked
25 for identification.)

1 QUESTIONS BY MR. ERCOLE:

2 Q. Okay. Let's mark this as
3 Exhibit 2.

4 Dr. Schumacher, is that -- make
5 sure I'm pronouncing it right.

6 A. Yes, thank you. Yes, that is
7 correct, Schumacher, yes.

8 Q. I have -- my last name is
9 Italian, so people frequently mispronounce
10 it, so I just wanted to make sure I was not
11 doing that with you.

12 Sir, is this a copy of your
13 curriculum vitae, or CV?

14 A. Yes, it is.

15 Q. Okay. And for your
16 undergraduate education, you attended the
17 University of California; is that correct?

18 A. Yeah, at San Diego. University
19 of California at San Diego, that's correct.

20 Q. Let me ask this: With respect
21 to that CV, is there anything in there that
22 is inaccurate or that at this point in time
23 you need to change?

24 And I'll represent that's the
25 CV that was produced in connection with your

1 expert report in this case.

2 A. As far as my own personal
3 knowledge, there's potentially a
4 typographical error, but content-wise, as far
5 as I'm aware.

6 Q. And for -- and what was your
7 major as an undergraduate?

8 A. Biology with a concentration in
9 physiology.

10 Q. You did not major in marketing,
11 correct?

12 A. That is correct.

13 Q. And for graduate education,
14 where did you -- where did you go for your
15 graduate education?

16 A. I first completed a Ph.D. in
17 physiology and pharmacology at the University
18 of California-San Diego.

19 Q. And you say you first did that.
20 What did you do afterward?

21 A. Well, I continued and became
22 sort of a combined -- I joined the school of
23 medicine at UC-San Diego and completed my
24 doctorate in medicine after that.

25 Q. Do you recall when that was?

1 A. I believe it's 1990.

2 Q. You did not -- you do not have
3 a Ph.D. in marketing, correct?

4 A. That's correct.

5 Q. And you do not have a Ph.D. in
6 economics, correct?

7 A. That is correct.

8 Q. With respect to -- after you
9 graduated from medical school, where did you
10 do your residency and postgraduate training?

11 A. Sure.

12 And I'm getting over a cold, so
13 sometimes I have to clear my throat here.

14 Excuse me.

15 I did a one-tier -- pardon me,
16 a one-year internship at Cedar Sinai Medical
17 Center in internal medicine, and that was
18 followed by a residency in anesthesia at
19 University of California-San Francisco.

20 Q. Any other residency or
21 postgraduate training that you did?

22 A. I did some additional sort of
23 combined postgraduate fellowship work in
24 mainly research areas in pain throughout, and
25 became a clinical instructor and then

1 assistant professor soon after completing my
2 residency.

3 Q. And where did you become a
4 assistant professor?

5 A. That was at the same
6 institution, the University of California at
7 San Francisco.

8 Q. Do you recall when that was?

9 A. Excuse me, just to make sure I
10 don't fumble the numbers.

11 I was -- I became a clinical
12 instructor from 1994 to 1995 and became on
13 faculty as an assistant professor in
14 residence in 1995 forward.

15 Q. And the residency that you did
16 was in anesthesia; is that correct?

17 A. Anesthesiology, that's correct.

18 Q. What did you do -- well, are
19 you still an assistant professor at this
20 point in time?

21 A. I'm a professor, full
22 professor, and chief of the division of pain
23 medicine at the University of California-San
24 Francisco in the department of anesthesia and
25 perioperative care.

1 Q. And what does perioperative
2 care mean?

3 A. It entails a range of subareas
4 for anesthesiology that includes pain
5 medicine, critical care, perioperative
6 evaluations that encompass the sort of total
7 care around a patient.

8 Q. Does perioperative care involve
9 care associated with surgical procedures?

10 A. That is correct.

11 Q. And so when you say "total care
12 around a patient," is it fair to say you're
13 talking about total care around a patient
14 immediately before and immediately after a
15 surgery?

16 A. So the mission of
17 anesthesiology encompasses the management of
18 pain. Certain departments of anesthesia have
19 descriptions that include and pain
20 management.

21 Our particular department is --
22 was originally just called the department of
23 anesthesia, and then it broadened its title
24 to anesthesia and perioperative care to
25 project a broader term to include the

1 responsibilities of anesthesiologists before,
2 during and after their operation.

3 Q. And with respect to the duties
4 of anesthesiologists after an operation, do
5 anesthesiologists continue to see patients
6 over long term after a particular surgery
7 takes place?

8 A. Typically an anesthesiologist
9 would have a follow-up visit after their
10 operation while they're still in the
11 hospital.

12 Q. You said "typically."
13 Is that one -- there's
14 typically a follow-up visit; is that correct?

15 A. That's the standard of care,
16 that there's a follow-up visit, that's
17 correct.

18 Q. And do you treat -- strike
19 that.

20 Do you treat chronic pain
21 patients in an outpatient setting?

22 A. No, I do not; however, I have
23 managed and taken care of patients with
24 chronic pain, or what we call acute on
25 chronic pain, for 20 years on the inpatient

1 side within the hospital.

2 Q. You said -- was it acute
3 chronic pain? Is that what you --

4 A. I said chronic pain, and what
5 we term acute on chronic. That is a patient
6 who has a chronic painful condition who has
7 come into the hospital for some other acute
8 problem. For example, they may have had --
9 require an operation on their colon or their
10 gallbladder, but they have a chronic painful
11 condition like back pain, for example.

12 Q. And so just so my notes are
13 clear, you do not treat those patients in an
14 outpatient setting; is that correct?

15 A. As chief of the division of
16 pain medicine, I oversee all aspects of our
17 division, and I have recruited and have a
18 medical director for outpatient pain
19 management center.

20 Q. Okay. So let me -- maybe my
21 question wasn't clear.

22 A. Sure.

23 Q. With respect to you, do you
24 treat -- just my notes are clear --

25 A. Sure.

1 Q. -- you do not treat patients in
2 an outpatient setting; is that correct?

3 A. That's correct. That's
4 correct.

5 Q. Okay. Are you board certified
6 in pain medicine?

7 A. No, I am not.

8 Q. Are you board certified in
9 addiction?

10 A. No, I'm not.

11 Q. What are you board certified
12 in?

13 A. In anesthesiology.

14 Q. With respect to -- you talked
15 about how, for anesthesiologists, the
16 standard of care is after a surgery, there is
17 typically a follow-up visit.

18 Do you recall that?

19 A. That's correct.

20 Q. Okay. Typically are there
21 multiple follow-up visits?

22 A. Well, I guess I would want to
23 know what the context of that is; that is,
24 under what circumstance are you describing.

25 Q. Sure. I'm just getting a sense

1 of with respect to anesthesiologists.

2 A. Uh-huh.

3 Q. After a surgery takes place,
4 how long -- and that patient is discharged
5 from the hospital, how long will an
6 anesthesiologist typically follow up with or
7 treat a patient?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: Again, the
10 standard for follow-up is that an
11 anesthesiologist, or anesthesia part
12 of the team, sees that patient
13 postoperatively at least once and --
14 yeah.

15 QUESTIONS BY MR. ERCOLE:

16 Q. So the standard of care then is
17 for the anesthesiology team or doctors to
18 then see a patient at least once after a
19 surgery takes place.

20 Is that what your testimony is?

21 A. All right. Based on the
22 context. If there are other factors
23 involved, the complexity of the case that
24 requires additional follow-up, there could be
25 additional visits by the anesthesiologist.

1 Q. And would you agree that
2 anesthesiologists see patients once in the
3 hospital before discharge?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: Physicians that
6 have been trained as anesthesiologists
7 have a variety of roles. If they have
8 a role that's just assigned to the
9 operating room, then what we just
10 described is a good depiction.

11 There are other
12 anesthesiologists like myself that
13 participate in pain management care on
14 a consult service, and as
15 anesthesiologists and pain medicine
16 physicians, we see patients daily and
17 follow-up visits as well.

18 QUESTIONS BY MR. ERCOLE:

19 Q. And that's in a hospital
20 setting, correct?

21 A. Yeah, in my case it is.

22 Q. Okay.

23 A. In other cases, those
24 anesthesiologists that will see patients in
25 the outpatient setting.

1 Q. Okay. And with respect to you,
2 have you -- strike that.

3 Do anesthesiologists see
4 patients on monthly bases over periods of
5 years?

6 Is that their responsibility?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: Anesthesiologists
9 that are pain management physicians
10 working in the outpatient clinic do
11 see patients on a regular basis,
12 potentially monthly.

13 QUESTIONS BY MR. ERCOLE:

14 Q. You do not, correct?

15 A. That is correct.

16 Q. Okay. Do you have any formal
17 education in marketing?

18 A. My education in marketing
19 represents reading and review of literature
20 that was included in review of the literature
21 for the National Academy of Sciences, the
22 consensus report from that, as well as some
23 materials that were also included and
24 reviewed for this report I prepared.

25 Q. Anything else?

1 A. No.

2 Q. So you have no formal training
3 in marketing, correct?

4 A. That's correct.

5 Q. Have you ever -- and is it fair
6 to say you don't have any specialized
7 knowledge with respect to sales or marketing
8 analyses generally, correct?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: Is there another
11 way to ask that question? I'm not
12 quite sure what the question is.

13 QUESTIONS BY MR. ERCOLE:

14 Q. Sure.

15 I'm just asking in terms of
16 your -- in terms of your background and
17 specialization here, let me ask this: When
18 was the national -- what is the National
19 Academy of Sciences consensus report that you
20 referenced?

21 A. Right.

22 So I was invited to serve as a
23 committee member on an analysis to
24 characterize and provide recommendations to
25 the national opiate epidemic, to serve on the

1 National Academy of Sciences Engineering and
2 Medicine. And this was requested in order to
3 understand -- not so much appoint blame, but
4 to understand, characterize and to provide
5 recommendations.

6 Within that body of work, there
7 was, by the committee, the realization that
8 opiate manufacturing, marketing, was a key
9 cause and driver for increased prescribing
10 opioids and also a key driving force for the
11 opioid epidemic.

12 Q. And we'll get into those
13 issues, but when was that consensus report
14 published?

15 A. It was published in, I
16 believe -- let me just double-check, but I
17 believe it's -- just one minute.

18 In 2017.

19 Q. Okay. And so before 2017, you
20 had no education or specialized experience
21 with respect to marketing; is that fair to
22 say?

23 MR. LOESER: Objection. Form.

24 Mischaracterizes his testimony.

25 THE WITNESS: I think that --

1 maybe could you say your question one
2 more time, please --

3 QUESTIONS BY MR. ERCOLE:

4 Q. Sure.

5 A. -- because I got a little bit
6 mixed up with what you're asking.

7 Q. No problem. Let's do it this
8 way.

9 You don't teach courses in
10 marketing, correct?

11 A. That is correct.

12 Q. You don't -- you haven't
13 published articles regarding marketing,
14 correct?

15 MR. LOESER: Objection.
16 Mischaracterizes his testimony.

17 THE WITNESS: Within my
18 publication list, I have no
19 publications in marketing.

20 QUESTIONS BY MR. ERCOLE:

21 Q. And you have no background --
22 strike that.

23 You have no degree in anything
24 concerning marketing, correct?

25 A. That is correct.

1 Q. And you don't hold yourself out
2 as an expert in marketing, do you?

3 MR. LOESER: Objection. Form.

4 THE WITNESS: I have not stated
5 I've ever been an expert in marketing.

6 QUESTIONS BY MR. ERCOLE:

7 Q. Have you ever consulted for a
8 pharmaceutical company?

9 A. I have, as part of my academic
10 career, had a collaboration with, I
11 believe -- and I'll just double-check
12 possibly two companies.

13 Q. And as you're double-checking,
14 can you let me know what you're referring to
15 there in your CV?

16 A. Sure. Sure. Just a minute.

17 And again, I'm not sure it
18 follows the definition that you provided.

19 I was invited to give a talk at
20 one company called Anesiva some years ago,
21 and on another I gave a talk in Italy, Zambon
22 Pharmaceuticals.

23 Q. Were you paid to give those
24 talks?

25 A. No. No.

1 I was -- my travel expenses
2 were reimbursed, as I recall.

3 Q. So just so I understand -- let
4 me ask this: Other than those talks that
5 you've given at -- are they -- how would you
6 define it?

7 Were they talks given for the
8 pharmaceutical companies?

9 A. I don't quite understand the
10 meaning of that question.

11 Q. Yeah.

12 So what were the talks about?

13 A. Sure. Okay.

14 Well, one had to do with
15 Anesiva. It related to my research on the
16 capsaicin receptor, which has been a
17 direction of my research. It's a hot chili
18 pepper receptor that is a potential target
19 for analgesic therapy, for chronic pain
20 therapy. And it discussed the structure and
21 function of that receptor in the peripheral
22 nervous system.

23 The other talk, the Zambon
24 talk, was -- followed in a similar light. It
25 talked about the structure and what we call

1 splice variants, sort of cousins of this
2 receptor and how there may be some potential
3 for therapeutic development in targeting that
4 receptor.

5 Q. Any other speeches that you've
6 done or given for pharmaceutical companies?

7 A. If you take -- just let me just
8 go through them --

9 Q. Sure.

10 A. -- to be as accurate as
11 possible.

12 One other thing I came across
13 that may be relevant, in 2010 I was invited
14 to give a talk about unmet needs of analgesia
15 for a venture innovation program as part of
16 UCSF, and that's where a number of, I think,
17 representatives from pharmaceutical companies
18 or startups were present. That's where I was
19 introduced to a representative from the
20 Zambon, for example.

21 Let me just continue. I think
22 that's right, yeah.

23 Q. Have you ever served as a
24 speaker regarding opioids for any
25 pharmaceutical company?

1 A. No, not that I recall.

2 Q. Have you ever received any
3 grants from pharmaceutical -- strike that.

4 Have you ever received a grant
5 from a pharmaceutical company for a study
6 that you've done?

7 A. Not that I'm aware of, no.

8 Q. Best of your recollection, have
9 you ever received any payments, whether in
10 the form of consulting fees or honorariums or
11 anything, from pharmaceutical companies?

12 A. Not that I recall.

13 Q. We talked a little bit about
14 your clinical practice currently.

15 Well, let me ask this:
16 Currently, what is the name of the hospital
17 where you will see patients?

18 A. The Moffitt-Long Hospitals at
19 UCSF Medical Center. I also --

20 Q. Sorry. I apologize. And just
21 tell me to shut up if I'm talking over you,
22 or your counsel can tell me to shut up,
23 that's fine. I apologize.

24 MR. LOESER: Really? We can do
25 that?

1 THE WITNESS: I also see
2 patients at the Mission Bay Hospital
3 campus.

4 QUESTIONS BY MR. ERCOLE:

5 Q. So with respect to the
6 Moffitt-Long Hospital, how often do you see
7 patients there?

8 A. I see chronic pain patients as
9 well as acute on chronic patients
10 approximately two days every week.

11 Q. And how about with respect to
12 the Mission Long {sic}?

13 A. It varies based on need. There
14 I would fill in for patients -- for
15 attendings that may be unable, so that's much
16 less often. I don't know how to describe
17 that, but that's less common.

18 Q. Okay. I mean, would you say
19 once a month maybe?

20 A. I think that's fair.

21 I also co-round with a
22 pediatric pain team as well, so on average,
23 maybe once a month there.

24 Q. Have you ever treated chronic
25 pain patients in a outpatient setting?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: So -- although
3 that's a question you asked before, I
4 would just amend that in my training
5 and rotations in the residency program
6 in anesthesiology, I was a trainee
7 evaluating and providing treatment
8 plans in the outpatient setting during
9 that time.

10 QUESTIONS BY MR. ERCOLE:

11 Q. And when was that?

12 A. During my anesthesia residency,
13 which was -- just a minute.

14 Essentially 1991 through 1994.

15 Q. And since then, you have not
16 treated any chronic pain patients in an
17 outpatient setting, correct?

18 MR. LOESER: Objection. Form.

19 THE WITNESS: Well, I
20 participate at the pain management
21 center on occasion with our
22 multidisciplinary panel reviews of
23 patients, and so I will participate in
24 that regards. I will sit in with a
25 review of patient cases and provide

1 recommendations when appropriate.

2 QUESTIONS BY MR. ERCOLE:

3 Q. Do you meet with the patients
4 there?

5 A. That is -- is the question do
6 we meet with the patients while we're
7 discussing?

8 Q. Well, I mean --

9 A. Sorry.

10 Q. Yeah, sure.

11 My question is a little bit
12 different.

13 Do you meet with -- strike
14 that. Let me go back.

15 How often do you do that?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: Right.

18 On average, probably once a
19 month. Yeah, that's about right.

20 And I -- as part of that --
21 sorry, just to -- I'll discuss cases
22 with the chronic pain faculty there or
23 medical director at least once a
24 month, that's correct.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. And when you say you will --
3 you "review patient cases and discuss with
4 faculty there," do you actually meet with --
5 you, individually, meet with patients in that
6 circumstance?

7 A. I typically do not meet with
8 the patients myself.

9 Q. Okay. Dr. Schumacher, I just
10 want to ask you a couple of questions
11 about -- to understand your expertise here.

12 You are not an expert in
13 economics, correct?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: I have not gained
16 an expertise in economics.

17 QUESTIONS BY MR. ERCOLE:

18 Q. And you're not a legal expert,
19 correct?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: I have not
22 described myself as a legal expert.

23 QUESTIONS BY MR. ERCOLE:

24 Q. And you are not an expert in
25 epidemiology; is that fair to say?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: As part of my
3 role, I've become more familiar with
4 the results of epidemiologic studies,
5 especially in preparation for the
6 National Academy of Sciences' report
7 as well as preparing reports --
8 preparing this particular report.

9 QUESTIONS BY MR. ERCOLE:

10 Q. Other than --

11 A. Other than that, I have no
12 additional expertise.

13 Q. And you're not an expert in
14 mathematics; is that fair to say?

15 MR. LOESER: Objection. Form.

16 THE WITNESS: I do not have an
17 advanced degree in mathematics.

18 QUESTIONS BY MR. ERCOLE:

19 Q. And you wouldn't call yourself
20 an expert in mathematics, correct?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: I wouldn't
23 describe myself having expertise in
24 mathematics.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. And you wouldn't describe
3 yourself as having expertise in statistics;
4 is that fair to say?

5 MR. LOESER: Objection. Form.

6 THE WITNESS: I would describe
7 myself as having a functional
8 knowledge of statistics as it relates
9 to outcomes data, my research
10 programs.

11 QUESTIONS BY MR. ERCOLE:

12 Q. Do you have any specialized
13 training with respect to regression analyses?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: Upon my graduate
16 work and my -- from medicine to my
17 Ph.D. work to my research, I've
18 been -- it's been necessary to review
19 papers that have used regression
20 analysis in different ways, and so
21 I've done some independent reading in
22 those areas.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Other than some independent
25 reading, have any expertise with respect to

1 regression analyses?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: I think that
4 describes my experience.

5 QUESTIONS BY MR. ERCOLE:

6 Q. Have you ever conducted a
7 regression analysis?

8 A. Ever?

9 Q. Yeah.

10 A. I have conducted a regression
11 analysis as part of my educational process
12 and statistical coursework in the past.

13 Q. And what is a regression
14 analysis?

15 A. It's an attempt to make a
16 correlation.

17 So, for example, if you want to
18 make a relationship between like how much you
19 eat and how much you weigh, there's a formula
20 to try to calculate how tightly that
21 relationship is.

22 Q. Have you conducted any
23 regression analysis with respect to the
24 opinions that you are giving in this case?

25 MR. LOESER: Object to the

1 form, and also note that the topic of
2 regression analysis is far outside the
3 scope of the opinions that
4 Dr. Schumacher is providing.

5 MR. ERCOLE: Well, fair enough.
6 We may disagree on that, but --

7 THE WITNESS: I didn't
8 understand your question.

9 QUESTIONS BY MR. ERCOLE:

10 Q. Sure. I'll repeat it for you.
11 In connection with the -- I'll
12 repeat it exactly.

13 Have you conducted any
14 regression analyses with respect to the
15 opinions that you're giving in this case?

16 MR. LOESER: Same objection.

17 THE WITNESS: I'm aware that
18 there are certain reviews that contain
19 regression analysis, but I have no
20 opinion on the particular details of
21 those regression analyses.

22 QUESTIONS BY MR. ERCOLE:

23 Q. Fair enough.

24 And let me -- and my question
25 may be even just a little bit easier than

1 that, too, which is: Have you, in connection
2 with any opinions you're giving here today,
3 run a regression analysis?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: I have not
6 personally run a regression analysis
7 on the information provided as part of
8 the report.

9 QUESTIONS BY MR. ERCOLE:

10 Q. You've referenced the work you
11 did in connection with the committee on pain
12 management and regulatory strategies.

13 Do you recall that?

14 A. I am -- I was a member of that
15 committee and also was a coauthor of that
16 report.

17 Q. What can we come up -- what
18 acronym can we come up so that --

19 A. How about NASEM?

20 Q. NASEM?

21 A. Do you mind?

22 Q. Okay.

23 A. N-A-S-E-M, NASEM.

24 Q. N-A-S-E-M, okay.

25 So when I refer to the NASEM

1 report, I'm going to be referring to that
2 document, or the NASEM committee, I'll be
3 referring to that committee.

4 A. Perfect.

5 Q. Does that work?

6 A. That works for me. Thank you.

7 Q. In connection with your work
8 there, did you run any regression analyses?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: That -- although
11 I did not myself, I know that other
12 committee members had that expertise
13 and focused on that area.

14 QUESTIONS BY MR. ERCOLE:

15 Q. You are not giving an opinion
16 one way or the other on the validity of any
17 regression analyses that were run with
18 respect to the NASEM report, are you?

19 MR. LOESER: Objection to form.

20 THE WITNESS: My role as a
21 member of that committee included
22 reviewing the results and conclusions
23 of that report and -- yeah.

24 Maybe you should repeat the
25 question again.

1 QUESTIONS BY MR. ERCOLE:

2 Q. Yeah, sure.

3 A. Sorry. I didn't answer it,
4 apparently.

5 Q. Yeah, no problem.

6 So my question is: Sitting
7 here today, you're not giving an opinion one
8 way or the other on the validity of any
9 regression analyses that were run with
10 respect to the NASEM report, correct?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: I'm here to give
13 validity to the conclusions of the
14 NASEM report.

15 QUESTIONS BY MR. ERCOLE:

16 Q. Right.

17 A. And if they're based on
18 regression analysis that were provided in
19 reference material in that report, then I
20 would support that conclusion.

21 Q. Did you independently review
22 any regression analyses that were done in the
23 NASEM report?

24 A. No, I did not.

25 Q. And you didn't conduct any of

1 those regression analyses, did you?

2 A. I did not --

3 MR. LOESER: Objection. Form.

4 THE WITNESS: -- conduct.

5 QUESTIONS BY MR. ERCOLE:

6 Q. And there were no regression
7 analyses in the NASEM report pertaining to
8 the impact, if any, of pharmaceutical
9 marketing, were there?

10 A. That's outside the scope of my
11 opinion.

12 Q. Sitting here today, you can't
13 recall any regression analyses performed on
14 pharmaceutical marketing in connection with
15 the NASEM report?

16 MR. LOESER: Counsel, do you
17 want him to review the report and see
18 if there's any opinions on regression
19 in the NASEM report?

20 It's about -- I don't know how
21 many pages.

22 THE WITNESS: It's hundreds of
23 pages. I would -- if that's
24 important, then I would take some time
25 to review the report.

1 QUESTIONS BY MR. ERCOLE:

2 Q. Okay. My question is a little
3 bit different, which is, sitting here today,
4 do you recall any regression analyses done on
5 pharmaceutical marketing in connection with
6 the NASEM report?

7 MR. LOESER: Counsel, object to
8 the form of the question --

9 MR. ERCOLE: Sure.

10 MR. LOESER: -- and again ask
11 if you want him to answer questions
12 about what's in the breadth of the
13 NASEM report, you should put the
14 report in front of you him.

15 MR. ERCOLE: You can object all
16 you want; I'm going to ask my
17 question.

18 THE WITNESS: Yeah, that's
19 outside the scope of my opinion.

20 QUESTIONS BY MR. ERCOLE:

21 Q. So is the answer to that
22 question, sitting here today you can't recall
23 one way or the other whether there was any
24 regression analyses done on pharmaceutical
25 marketing in connection with the NASEM

1 report?

2 MR. LOESER: Objection. Form,
3 mischaracterizes his testimony, and
4 again asks him for opinion on the
5 breadth of a report that's not in
6 front of him.

7 THE WITNESS: That's outside of
8 my opinion and the scope of my report.

9 QUESTIONS BY MR. ERCOLE:

10 Q. You're not giving an opinion on
11 that, correct?

12 A. That's correct.

13 Q. Okay. You are not -- would you
14 agree you're not an expert in local
15 government administration?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: I'll try not to
18 laugh.

19 What do you mean by "local
20 government" structure?

21 QUESTIONS BY MR. ERCOLE:

22 Q. Sure.

23 Do you believe you're -- well,
24 how about this: How about local government?
25 Do you believe that you are an expert on the

1 topic of how local government operates, for
2 instance?

3 MR. LOESER: Objection. Form.

4 THE WITNESS: The scope of my
5 report did not include investigation
6 into local government structures, if
7 that's what you're asking.

8 QUESTIONS BY MR. ERCOLE:

9 Q. Sure.

10 I mean, do you consider
11 yourself an expert on that topic?

12 MR. LOESER: Objection. Form.

13 Again, we're straying far
14 outside the scope of his opinions.

15 THE WITNESS: Yeah, I have no
16 opinion on that.

17 QUESTIONS BY MR. ERCOLE:

18 Q. Okay. Have you ever -- do you
19 know what a -- strike that.

20 Have you ever reviewed the
21 complaint that was filed in this case?

22 MR. LOESER: Which compliant,
23 Counsel?

24 THE WITNESS: I'm not sure I
25 understand the question --

1 QUESTIONS BY MR. ERCOLE:

2 Q. Sure.

3 A. -- what that means.

4 Q. Do you know what a complaint is
5 in civil litigation?

6 A. I have a -- my, perhaps, basic
7 would be that a county entity would form a
8 complaint to some other party because of
9 liability of costs or something like that.
10 That's -- I do not have a detailed
11 understanding.

12 Q. Do you recall ever reviewing
13 anything in this case or these cases that had
14 the title "complaint" on it with a number of
15 allegations in there?

16 A. The extent of my review of such
17 materials was to understand what a
18 multidistrict litigation process is to a
19 degree, but I did not spend significant time
20 reviewing those materials.

21 Q. Okay. So let me -- my question
22 is just a little bit different, which is,
23 sitting here today, do you recall ever
24 reviewing a document with the title
25 "complaint" on it in this particular case or

1 cases?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: I may have been
4 provided with such a document by
5 counsel, but I don't recall reviewing
6 it in detail where I can recollect the
7 details.

8 QUESTIONS BY MR. ERCOLE:

9 Q. Sure.

10 And is it fair to say that all
11 of the documents that you considered in
12 connection with your opinions in this case
13 are documented in the materials that you have
14 as Exhibit 1?

15 A. If you give me a moment, let me
16 just review. Thank you.

17 MR. LOESER: Counsel, we're
18 coming up on an hour, so when it's a
19 good time to take a break, I'd like to
20 do so. Perhaps when he's finished
21 answering this question.

22 THE WITNESS: Yeah, well, let
23 me just -- there's -- I have an
24 appendix to a list of -- or sources
25 of -- that were considered, and I just

1 want to be as accurate as possible
2 to...

3 Thank you. Yeah, I don't see
4 anything like that as...

5 QUESTIONS BY MR. ERCOLE:

6 Q. Okay. So let me --

7 A. Sorry, yeah, let's regroup.

8 Q. Let me just finish a couple of
9 questions on this topic and then we'll take a
10 break.

11 A. What was the question you just
12 asked, please?

13 Q. Yeah. So you just -- and let
14 me rephrase.

15 You just referred to Appendix 2
16 of your report, correct?

17 A. Uh-huh, that's correct.

18 Q. And that -- what is the title
19 of that appendix?

20 A. Well, it's supposed to say M.
21 Schumacher. It says, "T. Schumacher,
22 Materials Considered," yeah.

23 Q. Okay. And is that a complete
24 list of the materials that you considered in
25 formulating your opinion in this case?

1 A. As far as I recall, yes.

2 MR. LOESER: Counsel, I think
3 there also is a supplement which --

4 THE WITNESS: Oh, I'm sorry,
5 yes.

6 QUESTIONS BY MR. ERCOLE:

7 Q. And we'll show you that.

8 Is there a supplement that you
9 have in front of you in Exhibit 1?

10 A. Not that I'm aware of.

11 Q. Okay.

12 A. It has -- as I mentioned
13 before, has my report and Exhibits A, B and
14 C, the list of materials, Appendix 2, and my
15 CV.

16 Q. Okay. I just -- I want to make
17 sure that the record is clear on this.

18 So your counsel referred to a
19 supplement of materials considered.

20 Do you recall that?

21 A. That's correct.

22 Q. And you're aware that there was
23 a supplement of materials considered that was
24 provided in this case; is that fair to say?

25 A. That's right, I'm aware of

1 that.

2 Q. Okay. And between the
3 supplement that was provided --

4 A. Yes.

5 Q. -- and what's referred to as
6 Appendix 2 to your report, which is materials
7 considered, is that the entire and complete
8 list of the materials that you considered in
9 connection with formulating your opinions in
10 this case?

11 A. Within this binder of
12 Exhibit 1, that's correct.

13 Q. So let me -- I just want to
14 make sure we're absolutely --

15 A. Yeah.

16 Q. -- absolutely clear on this.

17 A. Yeah.

18 Q. I'm asking you -- step outside.
19 With respect to your opinions in this case --

20 A. Yes.

21 Q. -- the materials that -- is it
22 fair to say the materials you considered in
23 formulating those opinions are listed in
24 exhibit -- or excuse me, Appendix 2 and the
25 supplement to Appendix 2?

1 A. Right.

2 As well as, just to be
3 complete, the references in my report which
4 are embedded in Appendix 2, correct.

5 Q. Fair enough.

6 No other documents, correct?

7 A. Okay. Not that I'm aware of.

8 MR. ERCOLE: Okay. Good time
9 to take a break.

10 VIDEOGRAPHER: Okay. We are
11 now going off the record, and the time
12 is 10:28 a.m.

13 (Off the record at 10:28 a.m.)

14 VIDEOGRAPHER: We are now going
15 back on the record, and the time is
16 10:47 a.m.

17 QUESTIONS BY MR. ERCOLE:

18 Q. Dr. Schumacher, can you turn to
19 Appendix 2 in your binder of materials?

20 Actually, so let me take one
21 step back.

22 Have you, sir, ever -- since
23 becoming an attending and after your, I
24 guess, your residency, have you ever written
25 an outpatient prescription for any pain

1 management medicine?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: Initially when I
4 joined the pain management service,
5 the consult service on the inpatient
6 side, there were requests to write
7 prescriptions on occasion for some
8 patients being discharged, that's
9 correct.

10 QUESTIONS BY MR. ERCOLE:

11 Q. So when you say you "joined the
12 pain management service," what are you
13 referring to there?

14 A. In 1999, that was a clinical
15 consult service called the pain management
16 service.

17 Q. And how long -- and you said
18 when you joined that service, there were
19 requests to write prescriptions on occasion
20 for some patients being discharged; is that
21 fair to say?

22 A. That's correct.

23 Q. And how long did you work in
24 connection with that pain management service?

25 A. I've been serving on the

1 inpatient pain management service for
2 20 years.

3 Q. Okay. And can you -- do you
4 have a sense of how many outpatient
5 prescriptions for pain management that you've
6 written?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: The principal
9 responsibility for writing
10 prescriptions for discharge patients
11 fell to the primary services, as we
12 were a consult service. So it was
13 infrequent.

14 So, for example, at that
15 time if -- for -- attending for the
16 week, seven days, it might represent
17 one, you know, or two prescriptions
18 for that week coverage, given that all
19 the standard prescriptions would be
20 written by the admitting service.

21 QUESTIONS BY MR. ERCOLE:

22 Q. How many weeks, to the best of
23 your recollection, per year were you
24 associated with that service?

25 A. I've attended on the pain

1 management service eight days -- at a
2 minimum, eight days a month for the last
3 20 years. That's a minimum estimate.

4 Q. And other than in that
5 particular context that you just described
6 with respect to that pain management service,
7 have you written any outpatient prescriptions
8 for pain medicines?

9 A. I can't recall outside that
10 scope of those patients.

11 Q. And when was the last time that
12 you wrote an outpatient prescription for a
13 pain medicine?

14 A. So as part of prescribing
15 practices, as part of the consult service,
16 pardon me, our plan is written out to provide
17 recommendations to the primary service. So
18 either myself or the residents are not
19 writing the actual prescriptions, but we're
20 providing the recommendations for the primary
21 service in terms of the discharge
22 prescriptions.

23 Q. So with respect to your work at
24 the pain management service, you haven't
25 actually written those outpatient

1 prescriptions; is that fair to say? Instead
2 you've provided --

3 A. That is fair to say that I have
4 not physically or electronically, but I have
5 provided the input for the recommendations
6 for other physicians, that's right.

7 Q. And so just so that my notes
8 are clear, is it fair to say that since
9 you've been an attending doctor and since
10 your residency that you have not physically
11 written any outpatient prescription for pain
12 medicine?

13 MR. LOESER: Object to the
14 form.

15 THE WITNESS: I would not
16 describe it that way at all.

17 As I mentioned before, that
18 upon my initial participation on the
19 inpatient pain management service,
20 there were on occasion times to
21 require to write for controlled
22 substances for pain management.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Those were the infrequent times
25 that you discussed before, right?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: Yeah, I'm not
3 sure we actually quantitated exactly,
4 but as I mentioned before, the best of
5 my recollection, there may be -- while
6 I was on service for that week, the
7 best I can recall, there would be
8 maybe one or two prescriptions
9 written.

10 QUESTIONS BY MR. ERCOLE:

11 Q. Okay.

12 A. In that -- in that time.

13 Q. Sir, do you know who the
14 plaintiffs are in the case or cases where
15 you've been asked to provide an opinion?

16 MR. LOESER: Objection. Form.

17 Are you asking for the
18 bellwether plaintiffs or just all the
19 plaintiffs in the case?

20 THE WITNESS: As part of -- in
21 preparation of my report -- just a
22 minute. I don't want to be inaccurate
23 here.

24 QUESTIONS BY MR. ERCOLE:

25 Q. Do you need to look at the

1 report in order to answer the question?

2 A. I don't want to miss --

3 misspeak.

4 On the bottom of page 6 of my
5 report, defendants herein -- to defendant
6 manufacturers branded and generic opioid
7 products in the action brought by plaintiffs
8 in Cuyahoga County and Summit County, Purdue
9 Pharma, Endo, Janssen, Teva, Cephalon,
10 Mallinckrodt, Actavis and Allergan.

11 Those are what I understand are
12 the defendants in this -- for -- in
13 relationship to my report.

14 Q. And is your understanding --
15 well, let me take one step back.

16 So my question was different
17 than that.

18 A. Oh, okay.

19 Q. My question was -- and I'll
20 repeat it.

21 Do you know who the plaintiffs
22 are in the case or cases where you've been
23 asked to provide an opinion?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: Plaintiffs as in

1 the counties in Ohio, for example? Is
2 that what you're asking?

3 QUESTIONS BY MR. ERCOLE:

4 Q. What is your understanding
5 of -- do you have any understanding what a
6 plaintiff is?

7 A. My understanding of plaintiffs
8 are the representatives of the communities or
9 counties that have been harmed by a
10 particular product or methods.

11 Q. And do you know who those
12 counties are in Ohio that you referenced?

13 A. I'm not sure I understand what
14 level of detail you're asking for.

15 Q. Okay. I think you referred to
16 counties in Ohio, right?

17 And I'm asking you: Do you
18 know on which counties in Ohio you're
19 providing an opinion here today in this case?

20 MR. LOESER: And again, I'll
21 ask if you're asking about bellwether
22 plaintiffs, you should do so. If
23 you're asking about every plaintiff in
24 the case, you might want to make that
25 clear to him.

1 MR. ERCOLE: Well, I mean, to
2 be honest with you, I think -- I'm
3 going to -- I'm going to ask the
4 question. You can state your
5 objection.

6 MR. LOESER: Objection. Form.

7 MR. ERCOLE: Fair enough.

8 THE WITNESS: My understanding
9 is that this case is linked to a
10 multidistrict litigation process. And
11 in particular, this report and this
12 starting process is focused on
13 representatives from this Cuyahoga
14 County and Summit County.

15 QUESTIONS BY MR. ERCOLE:

16 Q. Have you ever been to Cuyahoga
17 County?

18 A. No.

19 Q. Have you ever been to Summit
20 County?

21 A. No.

22 Q. Do you know where they're
23 located in Ohio?

24 A. No.

25 Q. You referenced before -- I

1 think you read from a footnote on the first
2 page of your report with respect to
3 defendants; is that correct?

4 A. That's correct.

5 Q. And does your understanding of
6 who the defendants are in this case come from
7 information that counsel provided you?

8 A. That's correct.

9 Q. Do you know how many -- well,
10 and you've listed your -- are you aware of
11 whether or not -- whether there are any other
12 defendants in the case or cases where you've
13 been asked to provide that opinion?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: Well, I'm aware
16 that there's potential defendants
17 based on our introductions around this
18 table.

19 QUESTIONS BY MR. ERCOLE:

20 Q. Other than those introductions,
21 do you have any knowledge of any other
22 defendants in these cases?

23 A. Again, cursory, that's been in
24 the media, yeah.

25 Q. So other than cursory, what's

1 been in the media and the introductions
2 today, do you have any knowledge of any other
3 defendants that are in these cases?

4 A. No, I don't.

5 Q. Okay. And you're not giving an
6 opinion regarding the conduct of any
7 distributors of opioid medicines, correct?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: Well, my opinion
10 is -- pardon me -- has been focused on
11 the opioid industry. I don't believe
12 my opinion has excluded others, but I
13 have focused on the opioid industry in
14 the report.

15 QUESTIONS BY MR. ERCOLE:

16 Q. Okay. So my question is a
17 little bit different.

18 A. Okay. Sorry.

19 Q. You've defined what you
20 understand to be defendants in your report;
21 is that correct?

22 A. That's correct.

23 Q. And those defendants, as you've
24 defined in your report, do not include any
25 distributors; is that fair to say?

1 A. As I understand, I'm not
2 certain if any of these companies also
3 distribute medications. I don't know that
4 knowledge.

5 Q. And as defined in your report,
6 the defendants do not include any pharmacies;
7 is that fair to say?

8 A. I have no opinion on this, as
9 that -- it's outside the scope of -- my focus
10 of my report was the determination of whether
11 pharmacies were -- are included.

12 Q. And fair to say that it's
13 outside the scope of your report as to
14 whether or not any distributors were included
15 as opposed to actual manufacturers of
16 opioids?

17 MR. LOESER: Objection. Form.
18 Might be helpful to define
19 distributors.

20 THE WITNESS: I guess my
21 opinion is limited, not knowing
22 whether a particular defendant or
23 opioid company also controls -- has
24 controlling interest in pharmacies, so
25 that's why I'm having a hard time with

1 this.

2 QUESTIONS BY MR. ERCOLE:

3 Q. Let me take one step back then.

4 A. Okay.

5 Q. With respect to your opinion,
6 your opinion -- strike that.

7 MR. ERCOLE: Why don't you mark
8 this as Exhibit 3.

9 (Schumacher Exhibit 3 marked
10 for identification.)

11 QUESTIONS BY MR. ERCOLE:

12 Q. Sir, this document is -- do you
13 understand this document to be Appendix 2 to
14 your report, which we've --

15 A. That's correct.

16 Q. And this is the document that
17 we referred to that includes the materials
18 considered?

19 A. That's correct.

20 Q. Okay. If you turn to page 25
21 of this document.

22 Do you see that?

23 A. Page 25, that's correct.

24 Q. It says "Bates-stamped
25 documents"?

1 A. Yes, that's right.

2 Q. Okay. And it looks like
3 there's about -- a little over a hundred
4 documents that are there.

5 Do you see that?

6 MR. LOESER: Objection. Form.

7 QUESTIONS BY MR. ERCOLE:

8 Q. That are listed there?

9 A. Oh, wait a minute. Let's see.
10 Oh, I see.

11 Are you talking about 301
12 through 416?

13 Q. Yes.

14 A. Okay.

15 Q. Did your counsel provide these
16 documents to you?

17 A. Yes, they did.

18 Q. Did you ask to see additional
19 documents?

20 MR. LOESER: Objection. Form.

21 And we're not going to get into
22 questions and conversations between
23 this witness and counsel.

24 THE WITNESS: Counsel provided
25 these documents.

1 QUESTIONS BY MR. ERCOLE:

2 Q. Did you have any say in --
3 strike that.

4 Is it fair to say that -- let
5 me ask an additional question.

6 Do you know whether -- and do
7 you know what these Bate-stamped documents
8 refer to?

9 Are these company-specific
10 documents?

11 A. It's my understanding that most
12 of these are company-specific documents.
13 They have -- pardon me -- abbreviations that
14 indicate they're related to a particular
15 pharmaceutical company. That's my
16 understanding.

17 Q. Do you know why you only
18 reviewed these documents and not other
19 documents?

20 MR. LOESER: Objection.

21 And again, answer the question,
22 if you can, without divulging any
23 communication between counsel and
24 yourself.

25 THE WITNESS: Yeah, these are

1 the documents I was provided by
2 counsel.

3 MR. ERCOLE: Mark this as
4 Exhibit 4.

5 (Schumacher Exhibit 4 marked
6 for identification.)

7 QUESTIONS BY MR. ERCOLE:

8 Q. And with respect to the
9 company-specific documents that are reflected
10 in Exhibit 3 from Bates -- the Bates-stamped
11 documents 301 to 416, at least as of the time
12 that you authored your opinion, correct,
13 these were the list of Bates-stamped
14 documents that you reviewed in formulating
15 your opinions in this case, correct?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: So you're asking
18 me whether my report as written is
19 solely based on drawing from
20 Appendix 2, without the supplement?
21 Is that the question?

22 QUESTIONS BY MR. ERCOLE:

23 Q. Yeah.

24 So if you take a look -- why
25 don't we look at Exhibit 4.

1 A. Exhibit 4. Okay.

2 Q. Okay.

3 A. Sure.

4 Q. And do you see on the first
5 page it's -- you understand that to be a
6 letter from your counsel?

7 A. Yes, that's correct.

8 Q. Okay. And it identifies
9 supplemental materials considered.

10 Do you see that?

11 A. Yes, I do. Yes.

12 Q. And it talks about supplemental
13 materials reviewed after March 25, 2019?
14 Number 1?

15 A. Yes, I see that.

16 Q. Okay.

17 A. Thank you.

18 Q. And then number 2 lists
19 "Supplemental materials considered,
20 inadvertently omitted from the March 25, 2019
21 list."

22 Do you see that?

23 A. Yes, I do.

24 Q. And March 25, 2019, was the
25 date of your expert report?

1 A. That's correct.

2 Q. Okay.

3 A. Yeah.

4 Q. So and if you look at
5 Appendix 2 in Exhibit 4, do you see that?

6 A. Oh, yes.

7 Q. Okay. And it says,
8 "Supplemental materials considered,
9 inadvertently omitted from the March 25, 2019
10 list."

11 And it's an article, correct?

12 A. That is correct.

13 Q. Okay. There are no
14 Bates-stamped, company-specific documents
15 that are referenced in that appendix,
16 correct?

17 MR. LOESER: In Appendix 2?

18 QUESTIONS BY MR. ERCOLE:

19 Q. In Appendix 2.

20 A. I see no --

21 Q. Okay.

22 A. -- yeah, company-related,
23 Bates-stamped documents, that's correct.

24 Q. So with --

25 MR. LOESER: And, Counsel, just

1 for the record, the whole thing is
2 Appendix 2, including the Bates
3 stamped. So if you could just clarify
4 that you're talking about the --

5 MR. ERCOLE: Yeah, fair enough.

6 QUESTIONS BY MR. ERCOLE:

7 Q. So with respect to documents
8 that were omitted from your March 25, 2019
9 list, the only document that is referenced is
10 an article, correct? No Bates stamp numbers?

11 A. That's what I understand,
12 that's correct.

13 Q. Okay. And so with that as
14 background, let me go back and ask my
15 question.

16 With respect to the opinions
17 you reached in your March 25, 2019 report,
18 those opinions would have been based
19 exclusively, at least with respect to
20 company-specific documents, on the documents
21 that are reflected in Exhibit 3 at numbers
22 301 through 416; is that fair to say?

23 MR. LOESER: Objection. Form.

24 THE WITNESS: I would say
25 that's fair to say unless, again,

1 there was -- there was something
2 missed.

3 But as I understand this, this
4 was defined as inadvertent versus
5 supplemental, so I believe that's --
6 one second, sorry.

7 As best as I can tell, yes.

8 QUESTIONS BY MR. ERCOLE:

9 Q. Okay. And then after you
10 issued your opinion on March 25, 2019, you
11 considered some additional Bates-stamped
12 materials as reflected on page 2 of
13 Exhibit 4; is that correct?

14 A. Those additional materials were
15 provided by counsel.

16 Q. Right.

17 And you reviewed them -- it
18 says on the top, "Reviewed after March 25,
19 2019," right?

20 A. That's correct.

21 Q. And that would have been after
22 you formulated your opinions in this case,
23 right?

24 A. Well, I believe that, if I
25 remember correctly, that there is -- although

1 I prepared the report and submitted it, there
2 is a clause where additional supplemental
3 information if -- in the meantime, if that
4 was provided, that would supplement my
5 opinion.

6 Q. And the documents reflected on
7 page 2 of Exhibit 4 are documents that your
8 counsel selected and chose for you to review,
9 correct?

10 MR. LOESER: Objection. Form.

11 THE WITNESS: Are we talking
12 about the inadvertent omission or the
13 supplemental materials considered or
14 both?

15 QUESTIONS BY MR. ERCOLE:

16 Q. The supplemental materials
17 considered, page 2 of Exhibit 4, those are
18 documents that your counsel selected and
19 chose for you to review, correct?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: To the best of my
22 recollection.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Okay. And so,
25 Dr. Schumacher -- and I don't mean this to

1 be -- to sound funny, but let me just ask it
2 anyway.

3 You are not giving an opinion
4 in this case about any marketing materials
5 that you haven't reviewed; is that fair to
6 say?

7 MR. LOESER: Objection to form.

8 THE WITNESS: My opinion about
9 marketing materials is based on the
10 materials that we just discussed in
11 Appendix 2, I believe, then also
12 examples of which are included in my
13 report.

14 QUESTIONS BY MR. ERCOLE:

15 Q. Fair enough.

16 And if there are no marketing
17 materials from a particular company in
18 Appendix 2 or that are referenced in your
19 report, then you're not giving an opinion
20 about the marketing of that company; is that
21 fair to say?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: Within the body
24 of my report and in preparation, I
25 reviewed a number of articles that --

1 several that particularly focused on
2 marketing. One was authored by
3 Van Zee, for example.

4 And so within those reports,
5 there was discussion about marketing.
6 So I would say that inclusive in my
7 opinion would be articles that were
8 referenced that would also discuss
9 marketing and opioids.

10 QUESTIONS BY MR. ERCOLE:

11 Q. Okay. My question's a little
12 bit different.

13 A. Oh, I'm sorry.

14 Q. I'll ask it, and I'll just
15 try to be --

16 A. Okay.

17 Q. -- as simplistic as possible,
18 which is: You can only give an opinion on
19 marketing materials that you've actually
20 looked at, right?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: Well, I think
23 part of forming an opinion has to do
24 with reviewing the literature of what
25 I would consider other educated

1 opinions on marketing or the review of
2 the impact of that marketing on the
3 pharmaceutical industry. And I
4 believe that's what I'm trying to
5 describe as a relationship to the
6 report --

7 QUESTIONS BY MR. ERCOLE:

8 Q. Okay.

9 A. -- and marketing.
10 Maybe I made that confusing for
11 you.

12 Q. No, no, that's fair. So I'll
13 ask even a more basic question.

14 If there are no -- if there are
15 no marketing documents, no company-specific
16 documents listed in Appendix 2, whether the
17 supplement or the original one from a
18 particular company, that would mean that you
19 never reviewed any of the marketing materials
20 of that company?

21 A. That's true.

22 Q. Okay.

23 A. Yeah.

24 Q. And so if you -- let me give
25 you an example.

1 Have you ever heard of the
2 company Watson Laboratories?

3 A. I'm not familiar with that
4 name.

5 Q. Okay. Are you aware of any
6 marketing that they've engaged in?

7 MR. LOESER: Objection to form.

8 THE WITNESS: In the process of
9 reviewing these many hundreds and
10 hundreds of documents, it's difficult
11 to recall the name of a particular
12 company.

13 As I recall, various
14 pharmaceutical companies named in this
15 had subsidiaries, had other companies
16 or -- which had various names that
17 prepared marketing material on their
18 behalf. And it's beyond the scope for
19 my opinion or report to remember or
20 recall those without seeing other
21 documents directly.

22 QUESTIONS BY MR. ERCOLE:

23 Q. So I'll reference to you that
24 there are no documents -- I'll represent
25 there are no documents pertaining to Watson

1 Laboratories that are referenced in
2 Appendix 2 of your -- whether the supplement
3 or the original --

4 A. I see.

5 Q. -- of your report.

6 Assuming that that's accurate,
7 fair to say then you're not giving an opinion
8 about the marketing of that particular
9 company, given that you haven't reviewed any
10 of its materials?

11 MR. LOESER: Objection. Form,
12 and mischaracterizes his testimony.

13 THE WITNESS: Relative in
14 preparation for my report, I don't
15 recall reviewing documents specific to
16 Watson Laboratories -- is that what
17 you said? -- or Watson -- what was the
18 name?

19 QUESTIONS BY MR. ERCOLE:

20 Q. Watson Laboratories.

21 A. Watson Laboratories.

22 Q. And are you -- in the list of
23 defendants that you identify, that you've
24 identified here -- and your report -- it's
25 fair to say your report is limited to the

1 defendants that are listed in footnote 1 of
2 your report?

3 MR. LOESER: Objection. Form.

4 The witness indicated he wasn't
5 familiar with subsidiaries of various
6 of these companies.

7 THE WITNESS: My opinion on the
8 report is focused broadly on the
9 opioid pharmaceutical industry. Based
10 on evidence provided by counsel,
11 there's been a focus on particular
12 defendants that were listed in
13 footnote 1.

14 QUESTIONS BY MR. ERCOLE:

15 Q. And one of those defendants is
16 Cephalon; do you recall that?

17 A. That's correct.

18 Q. I'll represent to you there are
19 no marketing documents listed on your
20 appendix pertaining to Cephalon.

21 MR. LOESER: Objection to form.

22 And again, indicating the witness
23 indicated he was not familiar with
24 subsidiaries or affiliates of listed
25 defendants.

1 MR. ERCOLE: You can state your
2 objection.

3 MR. LOESER: Or you could
4 clarify --

5 MR. ERCOLE: And there's no
6 clarification needed. It says
7 defendants include Cephalon.

8 QUESTIONS BY MR. ERCOLE:

9 Q. And my question to you is: Do
10 you know that there are no documents listed
11 in your appendix pertaining to Cephalon?

12 MR. LOESER: Objection to form,
13 and again noting the witness has
14 indicated he's not familiar with
15 subsidiaries or affiliates of the
16 listed defendants.

17 THE WITNESS: In my preparation
18 of the report and selection of
19 examples for marketing claims that
20 were blatantly false, in my opinion,
21 or misleading, I selected a number of
22 examples to be included. It was not
23 intended to be an exhaustive list, and
24 it was drawn from the materials that
25 were provided by counsel.

1 QUESTIONS BY MR. ERCOLE:

2 Q. Fair enough.

3 Are you familiar with any
4 marketing document pertaining to Cephalon?

5 MR. LOESER: Same objection as
6 I made before, which is that the
7 witness has indicated his lack of
8 familiarity with the subsidiaries and
9 affiliates of the listed defendants.

10 If you want to ask him and
11 clarify the relationship, you might
12 get more information.

13 MR. ERCOLE: Counsel, you
14 should probably take a look at
15 footnote 1.

16 QUESTIONS BY MR. ERCOLE:

17 Q. But you can answer the
18 question, sir.

19 A. Fair enough.

20 I'm not aware of any marketing
21 materials that I reviewed that were available
22 to be reviewed that were the basis of the
23 report. Again, my intent was to draw
24 examples.

25 Q. Fair enough.

1 I'll also represent to you that
2 there are no documents referenced in either
3 your report or appendix pertaining to Teva
4 Pharmaceuticals.

5 MR. LOESER: Objection. Form.

6 QUESTIONS BY MR. ERCOLE:

7 Q. So my question to you is: Are
8 you familiar with any marketing document
9 pertaining to Teva USA or Teva?

10 MR. LOESER: Objection. Form.

11 THE WITNESS: In the
12 preparation of my report, I did not
13 review any marketing materials from
14 Teva.

15 QUESTIONS BY MR. ERCOLE:

16 Q. I'll represent to you that with
17 respect to two entities, Actavis Pharma and
18 Actavis, LLC, there are no documents
19 reflected in your appendix that have been
20 produced or come from those companies.

21 Is it fair to say that you
22 haven't reviewed any of those marketing
23 materials, too?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: I just need a

1 moment to consider that.

2 Well, within the document
3 page 25 within the appendix, the Bate
4 stamp, I believe, 301, 302, shows
5 Actavis as part of that.

6 QUESTIONS BY MR. ERCOLE:

7 Q. Do you know whether those
8 documents pertain to Actavis Pharma or
9 Actavis LLC in any way, shape or form?

10 MR. LOESER: Objection. Form.

11 THE WITNESS: It's my
12 understanding that that is the acronym
13 for Actavis.

14 QUESTIONS BY MR. ERCOLE:

15 Q. And I'll represent to you, sir,
16 that those are not documents that either
17 Actavis Pharma or Actavis LLC produced or
18 that relate to them.

19 So other than those two
20 documents, can you -- sitting here today, can
21 you recall any marketing that you reviewed
22 pertaining to or from Actavis Pharma or
23 Actavis LLC?

24 MR. LOESER: Objection. Form.

25 I also object to your

1 representations --

2 MR. ERCOLE: Okay.

3 MR. LOESER: -- with respect to
4 relationship to subsidiaries which
5 you're not explaining to the witness.

6 THE WITNESS: Under the review
7 of so many documents, it's difficult
8 for me to recall specifically in this
9 case.

10 QUESTIONS BY MR. ERCOLE:

11 Q. Do you recall -- did you review
12 any Ohio-specific documents?

13 MR. LOESER: Objection. Form.

14 THE WITNESS: Yes.

15 I remember reviewing
16 Ohio-specific documents, which I
17 believe some of which I included in my
18 report.

19 QUESTIONS BY MR. ERCOLE:

20 Q. Okay. Did you review any
21 documents produced by Summit County in this
22 case?

23 MR. LOESER: Objection. Form.

24 THE WITNESS: If you'd give me
25 a moment, let me just check one part

1 of my report. Thank you.

2 I can't recall any specific
3 about Summit County.

4 QUESTIONS BY MR. ERCOLE:

5 Q. Any specific documents produced
6 by Cuyahoga County that you've reviewed?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: So can you
9 describe -- any document? Anything
10 with Cuyahoga County's name on it? Is
11 that what you're asking?

12 QUESTIONS BY MR. ERCOLE:

13 Q. Yeah, how about we'll go from
14 there. Anything pertaining to Cuyahoga
15 County.

16 A. I can't recall.

17 Q. Review any deposition testimony
18 that has been taken in this case or any other
19 case?

20 A. Sorry, that's --

21 Q. Sure. Do you --

22 A. In what context?

23 Q. Do you know what a deposition
24 is?

25 A. Yes. We're in a deposition.

1 Q. Exactly.

2 So are you aware that -- are
3 you aware of whether any depositions have
4 been taken in the MDL cases?

5 A. I was informed by counsel that
6 this may be one of the first depositions as
7 part of this process.

8 Q. So is it your understanding
9 that this is the first deposition taken in
10 any of the multidistrict litigation cases for
11 any purpose?

12 MR. LOESER: Objection. Form.

13 There may be some confusion
14 about whether this type of deposition
15 was the same as the others.

16 THE WITNESS: Yeah, I was not
17 clear on the order or the relationship
18 of depositions.

19 QUESTIONS BY MR. ERCOLE:

20 Q. So you don't know one way or
21 the other?

22 A. That's correct.

23 Q. Okay. So fair to say since you
24 don't know, you haven't reviewed any
25 deposition testimony of any of the defendants

1 or any of the plaintiffs or anyone else in
2 connection with this case?

3 A. I can't recall reviewing any
4 deposition.

5 Q. And if you would -- if you
6 would you have reviewed it, you would have
7 listed it as one of the materials --

8 A. Yeah, I'm not aware of that.

9 Q. Did you review any declarations
10 by any of the defendants or plaintiffs or any
11 third parties in this case in formulating
12 your opinions?

13 MR. LOESER: Objection to form.

14 THE WITNESS: The only
15 materials relative to the defendants
16 would be a few cursory items I've seen
17 in the press that have been quoted.

18 QUESTIONS BY MR. ERCOLE:

19 Q. Okay. Do you know what -- sir,
20 do you know what a declaration is?

21 A. I'm unfamiliar with a
22 declaration.

23 Q. So since you don't know what it
24 is, you probably -- it would be unfair to ask
25 whether or not you've reviewed any of those,

1 right?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: I don't recall

4 reviewing any declarations.

5 QUESTIONS BY MR. ERCOLE:

6 Q. Okay. Have you received any
7 summaries of any analyses or information from
8 counsel that you've relied upon in
9 formulating your reports?

10 MR. LOESER: Objection. Form.

11 And again, we're -- answer to
12 the extent you can without divulging
13 any actual communications between
14 yourself and counsel.

15 THE WITNESS: I drafted the
16 report. I shared it with counsel, who
17 provided organizational assistance.

18 QUESTIONS BY MR. ERCOLE:

19 Q. Okay. So my question is a
20 little bit different, which is: In terms of
21 formulating your opinions in this case, did
22 you receive any summaries of facts or
23 information from counsel that formed the
24 basis for your opinions in this case?

25 MR. LOESER: Objection. Form.

1 And again, I think we have a --
2 so everyone understands the protocol,
3 the witness will not be answering any
4 questions that require him to divulge
5 communications with counsel.

6 MR. ERCOLE: Okay. Well --

7 MR. LOESER: If you're asking
8 him for facts and opinions he relied
9 on, those are identified in his
10 report.

11 MR. ERCOLE: Well, I'm asking
12 whether he's been provided any
13 summaries that he's -- he's been
14 relied upon by counsel.

15 MR. LOESER: And the witness is
16 not going to answer any question about
17 communications with counsel except for
18 those on which he relied in forming
19 his opinions.

20 MR. LEVINE: For the record,
21 it's "considered," not "relied upon."

22 QUESTIONS BY MR. ERCOLE:

23 Q. Yeah. I mean, that's my
24 question.

25 Did you receive any summaries

1 from counsel that you considered or relied
2 upon in formulating your opinions?

3 A. My report is based on my
4 research built from my career in the area of
5 pain medicine. It was built from my
6 knowledge of chronic pain and the difficult
7 treatment of chronic pain.

8 It relies on review of
9 literature that form the foundation of the
10 NASEM report, and it is built on the review
11 of the literature that came from establishing
12 this report.

13 Counsel's provided
14 organizational support in this report.

15 Q. So, sir, do you remember my
16 question?

17 A. So, no.

18 Q. Okay. Dr. Schumacher, you do
19 not practice medicine in Ohio, correct?

20 A. That is correct.

21 Q. You're not licensed to practice
22 medicine in Ohio?

23 A. That's correct.

24 Q. You don't treat patients in
25 Ohio?

1 A. Treat patients physically in
2 Ohio?

3 Q. Sure.

4 A. I've certainly treated patients
5 from Ohio.

6 Q. How many patients have you
7 treated from Ohio?

8 A. It's hard to recall.

9 Q. Okay. Have you ever spoken
10 with any -- strike that.

11 Did you speak with any Ohio
12 doctors in any field of medicine for purposes
13 of forming the opinions that you're giving in
14 this case?

15 A. Not that I'm aware.

16 Q. Did you ever conduct any survey
17 or study of Ohio doctors for purposes of
18 formulating your opinions in this case?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: I have not
21 personally prepared surveys of -- I'm
22 sorry, I lost the last part of that
23 question.

24 QUESTIONS BY MR. ERCOLE:

25 Q. Sure, I'll repeat it.

1 Did you ever conduct any survey
2 or study of Ohio doctors for purposes of
3 formulating your opinions in this case?

4 A. No, I did not.

5 MR. LOESER: Objection.

6 QUESTIONS BY MR. ERCOLE:

7 Q. And so you've never spoken with
8 any Ohio doctors to ask them, for instance,
9 why they may have written an opioid
10 prescription for patients; fair to say?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: My exposure to
13 Ohio doctors would be represented by
14 statements they made in the call notes
15 that were part of the report as
16 examples of misstatements from the
17 pharmaceutical sales reps to such
18 doctors.

19 QUESTIONS BY MR. ERCOLE:

20 Q. And that's the extent of your
21 exposure to Ohio doctors?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: Relative to this
24 report.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. Sure.

3 Relative to the opinions --

4 A. Yeah.

5 Q. -- you're giving in this case,
6 right?

7 A. That's correct.

8 Q. Have you conducted any survey
9 or study of Ohio patients to understand
10 whether they've benefitted from opioids that
11 they've been prescribed?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: Relative to
14 developing my own survey or analysis
15 of opioid use for people in -- taking
16 opioids in Ohio, there may be overlap
17 in some of the reference material that
18 I used that if there were surveys done
19 in those papers, but I've not done
20 myself.

21 QUESTIONS BY MR. ERCOLE:

22 Q. Are you familiar with any
23 survey that you can -- that you can recall
24 today that evaluates whether patients in Ohio
25 have benefitted from opioids that they've

1 been prescribed?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: I can't recall.

4 QUESTIONS BY MR. ERCOLE:

5 Q. How about this: Did you ever
6 speak with any patient in Ohio who received
7 an opioid prescription in formulating any of
8 your opinions in this case?

9 A. Not that I'm aware of.

10 Q. Sitting here today, can you
11 identify any Ohio prescriber who wrote an
12 opioid prescription because of a statement
13 that you contend was false that an opioid
14 manufacturer made?

15 A. Well, I would refer to some of
16 the exhibits that I put in the report as
17 potential examples where following a
18 misstating -- a misleading statement made by
19 a pharmaceutical representative, that the
20 sales representative then states that they
21 have gotten assurance from that doctor that
22 they would now write for a higher-dose,
23 long-acting opioid, for example.

24 Those are some of the examples
25 that I included in the report.

1 Q. So what exhibit are you
2 referring to?

3 A. If you give me a moment,
4 please.

5 Q. Actually, for clarity of the
6 record, you are looking in Exhibit 1,
7 correct?

8 A. Yes, that's correct.

9 Q. Okay. And what exhibit in
10 Exhibit 1 are you referring to?

11 Not in the sense of the Bates
12 number, in the sense of the -- if you look at
13 the first page, there should be an exhibit.

14 MR. LOESER: It's his report.

15 THE WITNESS: It's within my
16 report, yeah, sorry.

17 So, for example, on page 36 of
18 my report there's a note, July 6, 2000
19 note, from Ohio, quote: "Spoke with
20 MD who expressed concern re: one
21 patient receiving 120 milligrams every
22 12 hours for back pain. Discussed
23 with the provider that there was no
24 ceiling dose with oxy like
25 short-acting. He seemed to think that

1 this patient was abusing the product.
2 He needs reaffirmation."

3 And thus the sales rep said
4 then: "The decreased ability of oxy
5 to be abused in decreasing number of
6 tablets."

7 And again, that was a call note
8 from a Purdue sales representative in
9 Ohio.

10 Another that says: "Doc said
11 he had been using oxy for a while and
12 that he uses high doses. I reminded
13 the doc there's no ceiling and that he
14 should not worry about how high he
15 needs to go."

16 QUESTIONS BY MR. ERCOLE:

17 Q. Do you know --

18 A. So those are what I have used
19 as examples in this report and -- reports
20 that suggest that these representatives were
21 influencing physician practices even in the
22 face of concerns that they showed.

23 Q. Right.

24 And so you're using the word
25 "suggest," right?

1 You never spoke with those two
2 doctors, correct?

3 A. No, I did not talk to those two
4 doctors.

5 Q. And do you know whether those
6 two doctors ended up writing prescriptions
7 after those -- let me just finish.

8 Do you know -- and I'll do -- I
9 don't mean to cut you off. I'll try to do
10 the same. So again, if I'm talking --

11 A. Sorry, I didn't mean to
12 interrupt you.

13 Q. Not at all.

14 Do you know whether those two
15 doctors that are sort of, I guess, implicitly
16 referenced in the call notes you actually
17 identified wrote any prescriptions after that
18 particular interaction?

19 A. I do not have that evidence.

20 Q. And do you know whether or not
21 any of those doctors were actually influenced
22 by those interactions to write any opioid
23 prescriptions?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: Well, that being

1 one example, there are other examples
2 of these call notes that I reviewed
3 that stated, based on the report of
4 the sales representative, that
5 physicians at that moment told the rep
6 that they were now going to be writing
7 prescriptions at either higher doses
8 or switching from combined forms of
9 opioids to the sustained forms of, for
10 example, OxyContin.

11 QUESTIONS BY MR. ERCOLE:

12 Q. And do you know whether or not
13 any of those physicians actually did write
14 prescriptions --

15 MR. LOESER: Objection. Form.

16 QUESTIONS BY MR. ERCOLE:

17 Q. -- after those interactions you
18 just identified?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: Although I do not
21 have evidence that those specific
22 physicians wrote, based on my review
23 of the literature and the presence of
24 the opioid epidemic, it's been
25 concluded that this has been one of

1 the driving forces behind
2 overprescription of potent, high-dose
3 opioids.

4 QUESTIONS BY MR. ERCOLE:

5 Q. Okay. And when you refer to
6 other call notes, what are you referring to?

7 Is there a list of those call
8 notes?

9 A. Just hang in there one minute.
10 So in Exhibit B, that's
11 within -- that's been submitted. For
12 example, on Exhibit B, number 5, and I state:
13 "Doctor has a ton of Vico," Vicodin,
14 "patients, a lot of low back pain, leery of
15 Class IIs. Used product information to sell
16 low abuse, Q12. And doctor agreed to use for
17 all his low back" -- patients, presumably --
18 "instead of Vicodin. Keep on this guy. This
19 is easy money."

20 So there are other examples in
21 Exhibit B.

22 Q. Right.

23 So Exhibit B, does this reflect
24 the call notes that you've reviewed in this
25 case?

1 A. It's an example of the call
2 notes.

3 Q. Well --

4 A. There were thousands and
5 thousands of call notes that were provided by
6 counsel.

7 Q. Okay. Well, Exhibit B, at
8 least, are the call notes that --

9 A. Are --

10 Q. Let me just finish.

11 Exhibit B reflects the call
12 notes that you've considered in connection
13 with this case; is that correct?

14 A. That is correct.

15 Q. Okay. Sitting here today, can
16 you identify for me any false statements that
17 were made by Cephalon or a Cephalon sales
18 representative to any prescriber in Ohio?

19 MR. LOESER: Objection to form.

20 THE WITNESS: I'm not aware of
21 any.

22 MR. LOESER: Counsel, we've
23 been going about another hour. So if
24 you finish up this line --

25 MR. ERCOLE: Sure.

1 MR. LOESER: And again, we
2 should talk about whether we want to
3 take lunch now or come back and
4 take --

5 QUESTIONS BY MR. ERCOLE:

6 Q. Okay. Sitting here today, can
7 you identify for me any false statements that
8 were made by Teva or Teva USA or a Teva USA
9 sales representative to any prescriber in
10 Ohio?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: No, I have no
13 information to support that.

14 QUESTIONS BY MR. ERCOLE:

15 Q. Sitting here today, can you
16 identify for me any false statements that
17 were made by Watson Laboratories or Watson
18 Laboratories sales representative to any
19 prescriber in Ohio?

20 MR. LOESER: Objection. Form.

21 And again, the issue of
22 subsidiaries and whether you want to
23 explain the relationship.

24 THE WITNESS: I don't know.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. Sitting here today, can you
3 identify for me any false statements that
4 were made by Actavis Pharma or any sales
5 representative of Actavis Pharma to any
6 prescriber in Ohio?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: I don't know.

9 QUESTIONS BY MR. ERCOLE:

10 Q. Sitting here today, can you
11 identify for me any false statements that
12 were made by Actavis LLC or any sales
13 representative of Actavis LLC to any
14 prescriber in Ohio?

15 MR. LOESER: Objection. Form.

16 Same objection about
17 subsidiaries and what information you
18 would like the witness to evaluate
19 when answering your questions.

20 THE WITNESS: I don't know.

21 QUESTIONS BY MR. ERCOLE:

22 Q. How about sitting here today --
23 putting aside "to prescribers in Ohio."

24 Sitting here today, can you
25 identify any false statement that any of

1 those entities I just identified, Cephalon,
2 Watson Labs, Teva USA, Actavis Pharma or
3 Actavis LLC have made in any context?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: Given the
6 materials that I've reviewed, I -- and
7 focused on the report, which is not
8 intended to be an exhaustive review of
9 the -- of all manufacturers, I do not
10 have evidence for those listed
11 companies.

12 MR. LOESER: Is now a good time
13 for a break?

14 MR. ERCOLE: Sure, if you want
15 to take a break.

16 THE WITNESS: Yeah, I think
17 that would be good.

18 MR. LOESER: And do you want to
19 just break for lunch, or do you want
20 to come back and then go another --

21 MR. ERCOLE: How about we go
22 off the record and then talk about
23 that?

24 VIDEOGRAPHER: Okay. We are
25 now going off the record, and the time

1 is 11:46 a.m.

2 (Off the record at 11:46 a.m.)

3 VIDEOGRAPHER: We are now going
4 back on the record, and the time is
5 12:39 p.m.

6 QUESTIONS BY MR. ERCOLE:

7 Q. Good afternoon, Dr. Schumacher.

8 A. Good afternoon.

9 Q. Sir, have you -- in your
10 capacity as a treating physician, have you
11 ever been visited or detailed by sales
12 representatives from pharmaceutical
13 companies?

14 A. Yes.

15 Q. Okay. And how many -- is that
16 a frequent occurrence?

17 A. Not recently. The university
18 had instituted a number of rules that further
19 and further restrict pharmaceutical reps to
20 have direct access to physicians and training
21 physicians.

22 Q. When were you detailed by
23 pharmaceutical representatives?

24 Do you have an approximate
25 period of time?

1 A. Well, I recall through -- as a
2 medical student attending lunches that were
3 sponsored by companies as well as through
4 internship and residency program. I think it
5 seems to taper off around 2000. Maybe
6 before. It's hard to recall.

7 Q. Okay. So and I'm not holding
8 you to that time period. But your best
9 recollection is that after 2000 you did not
10 receive visits as a physician from
11 pharmaceutical representatives?

12 A. Well, so I guess the question
13 is the context of which type of
14 pharmaceutical representative had I been
15 approached by.

16 I believe beyond that time I
17 specifically was approached by a
18 pharmaceutical representative marketing
19 buprenorphine.

20 Q. How about since 2000 with
21 respect to have you been visited or detailed
22 by any pharmaceutical representative -- sales
23 representatives concerning opioid medicines
24 other than buprenorphine?

25 A. I can't recall.

1 Q. So before 2000, do you recall
2 being detailed then by pharmaceutical
3 representatives concerning opioid medicines?

4 A. There was a range of
5 pharmaceutical representatives, some that
6 represented like anesthetic-based drugs, for
7 example, muscle relaxants and things like
8 that.

9 And I just remember, again,
10 some sponsorship talks and things like that.
11 That's -- I don't have a very clear
12 recollection, to be honest.

13 Q. Okay. Sitting here today, with
14 respect to any of the visits that you had by
15 pharmaceutical representatives concerning
16 opioid products prior to 2000, can you recall
17 any specific statements that were made by
18 pharmaceutical representatives to you prior
19 to 2000 during those visits?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: Not -- I
22 remember -- what I do remember is
23 statements from mentors that were
24 passed along by their recollection or
25 by their experience to me about --

1 specifically about OxyContin and its
2 safety around older patient
3 populations.

4 But I don't recall any direct
5 contact with representatives, sales
6 representatives.

7 QUESTIONS BY MR. ERCOLE:

8 Q. So at least for you
9 specifically, with respect to the instances
10 in which you've been detailed by sales
11 representatives for opioid products, you
12 don't recall any specific instances where
13 someone would have said something that you
14 believed was false or misleading regarding
15 those products; is that fair to say?

16 MR. LOESER: Objection to form.

17 THE WITNESS: I can't recall.

18 QUESTIONS BY MR. ERCOLE:

19 Q. Are you -- Dr. Schumacher, are
20 you a member of the American Pain Society?

21 A. I have been a member of the
22 American Pain Society for a number of years.

23 I believe their renewal notice
24 is still sitting on my desk, but I think I'm
25 still for this year subscribed.

1 Q. And if you look at page 3 of
2 your --

3 A. Yeah.

4 Q. -- résumé?

5 A. Yes, that's right.

6 Q. It says 2000 to the present?

7 A. Yes, that's right.

8 Q. And have you given talks at
9 American Pain Society conferences before?

10 A. I'd have to look closely.

11 I know that I presented
12 scientific poster presentations at the
13 meetings. In terms of the engagement of
14 giving talks, I would have to review my list
15 of talks to not miss something.

16 Q. Sure.

17 A. Do you want me to do that?

18 Q. No, fair enough. That's your
19 recollection.

20 A. Okay.

21 Q. So fair to say that you would
22 not have remained a member of the American
23 Pain Society if you thought that that
24 association was somehow a shill for
25 pharmaceutical manufacturers?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: Yeah, I wouldn't
3 use those words.

4 I think that it's important for
5 anyone in the field of pain to have a
6 range of resources to look at, both
7 going to the meetings -- the APS is
8 known to be a -- kind of a clinically
9 focused meeting. And in that regards,
10 it's a venue to present a wide range
11 of approaches to pain management.

12 It's also considered by those
13 that are just in the basic sciences an
14 opportunity for them to come and see
15 what's going on in clinical pain.

16 In terms of what is presented
17 at APS, really each talk or -- you
18 know, really has to stand on its own
19 in terms of its scientific integrity.

20 QUESTIONS BY MR. ERCOLE:

21 Q. With respect to the American
22 Pain Society, do you think there's been
23 valuable educational materials that have been
24 presented at the conferences where you've
25 participated for the American Pain Society?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: The value of
3 attending American Pain Society
4 meetings is a range. First and
5 foremost is actually the networking
6 that occurs or can occur.

7 And in particular, the decision
8 to go to a particular meeting
9 typically is driven by a particular
10 speaker that might be present. That
11 influences probably why attending a
12 particular meeting in one year or
13 another.

14 QUESTIONS BY MR. ERCOLE:

15 Q. With respect to the instances
16 in which you were detailed by -- strike that.
17 Let me go back.

18 We talked about instances where
19 prior to 2000 you were detailed by
20 pharmaceutical sales representatives.

21 Do you recall that?

22 A. As best I can recall.

23 Q. Yeah.

24 Did any of those -- sitting
25 here today, did you ever write an

1 inappropriate or unnecessary prescription as
2 a result of one of those detailing visits?

3 MR. LOESER: Objection. Form.

4 THE WITNESS: Right.

5 The influence of prescribing
6 practices at that time had a lot to do
7 with the mentorship I had received,
8 some of which, I believe, was
9 influenced by marketing, as I
10 mentioned before, especially around
11 the use of the OxyContin and the
12 elderly.

13 And at that time, if I can try
14 to think back at that moment, the idea
15 of writing prescription for OxyContin
16 for someone that was older seemed like
17 the right thing to do because I was
18 reassured by that information from a
19 mentor at the time.

20 I can't recall a specific
21 instance where I was detailed and that
22 resulted precisely into a single
23 prescription.

24 However, I have to say that at
25 that time I was quite aware of the

1 increasing number of patients coming
2 into the hospital with chronic pain on
3 these various medications, and as part
4 of our role was to assess their --
5 their value for -- of such patients
6 and potentially to continue them.

7 So it became obvious that many,
8 many patients were not -- their pain
9 was still not well-managed despite
10 that.

11 Those are the -- my
12 recollections at that time.

13 QUESTIONS BY MR. ERCOLE:

14 Q. Sir, do you agree that chronic
15 pain is a serious medical condition?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: Chronic pain is a
18 complex process and one that is
19 associated with a great deal of
20 disability for the country and serious
21 enough to -- for me to want to pursue
22 a career in this area and identify new
23 mechanisms and new therapeutic targets
24 to relieve pain and suffering.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. Do you agree that -- I'm going
3 to ask you a series of questions and hope --

4 A. Okay.

5 Q. -- hopefully we can reach
6 agreement on these issues.

7 Do you agree that every patient
8 must be treated individually by their
9 doctors?

10 MR. LOESER: Objection. Form.

11 THE WITNESS: The process of
12 medicine and how we apply our
13 knowledge is -- should be in an
14 evidence-based manner, and having each
15 patient encounter arbitrarily left to
16 a physician's decision, independent of
17 a body of scientific knowledge that
18 supports that practice, I do not
19 believe is correct practice of
20 medicine, per se.

21 And so there are -- the
22 development, especially on population
23 basis, the proper, appropriate way to
24 manage things like chest pain, for
25 instance, or something like that, or

1 diabetes, for example, there tends to
2 be a consensus around these.

3 And then there's the context of
4 the patient in which the individual
5 physician would then consider those
6 treatment options.

7 QUESTIONS BY MR. ERCOLE:

8 Q. So with respect to the context
9 of the patient, is it fair to say that the
10 treatment options must be individualized and
11 tailored to the specific patient at issue?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: I would say that
14 they need to be individualized based
15 on the evidence of medicine that
16 they're appropriate.

17 QUESTIONS BY MR. ERCOLE:

18 Q. And would you agree that it's
19 important for physicians to have a variety of
20 treatment options to choose from when they
21 treat a particular medical condition?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: Well, depending
24 on the medical condition, there may be
25 very few options or a single option

1 available.

2 The presumption is that that
3 option or options, there is strong
4 scientific evidence to support them;
5 in addition, that the risk of harms do
6 not outweigh the benefits of applying
7 those particular treatment options.

8 QUESTIONS BY MR. ERCOLE:

9 Q. Sure.

10 And that risk/benefit analysis
11 needs to be conducted for each particular
12 patient when figuring out what the treatment
13 for that patient should be, correct?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: I believe most
16 physicians do not want to harm their
17 patients, and for that reason, most
18 physicians are very cautious in their
19 clinical decisions, especially if
20 they're recommending or initiating
21 therapy that could potentially produce
22 harm.

23 QUESTIONS BY MR. ERCOLE:

24 Q. So let me reask my question,
25 because I just want to make sure we're still

1 on the same --

2 A. I'm sorry, I missed that then.

3 Q. Sure.

4 The risk/benefit analysis you
5 talked about needs to be conducted for each
6 particular patient by a prescriber when
7 figuring out what the proper treatment is for
8 that particular patient; is that fair to say?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: I would hope that
11 each physician weighs both the risk
12 and benefit in their decision, that's
13 correct.

14 QUESTIONS BY MR. ERCOLE:

15 Q. And that with respect to that
16 decision, you're referring to the decision to
17 treat a particular patient, correct?

18 MR. LOESER: Objection. Form.

19 THE WITNESS: I guess I would
20 need the context of that a little bit
21 to better answer your question.

22 QUESTIONS BY MR. ERCOLE:

23 Q. I mean, you testified that you
24 would hope that each physician weighs both
25 the risk and benefit in their decision.

1 Do you recall that? You just
2 said it.

3 A. Right. And so if we're talking
4 about analgesic therapy or all therapy.

5 Q. Sure.

6 How about with respect to
7 analgesic therapy?

8 A. Sure.

9 Q. You agree that you would expect
10 the physician to weigh the risk and benefit
11 of prescribing an opioid to a particular
12 patient?

13 A. Yes.

14 Q. And would you agree that a
15 medication is appropriately prescribed if the
16 physician writes a prescription after
17 properly weighing its risks and benefits?

18 MR. LOESER: Objection to form.

19 THE WITNESS: Right.

20 MR. LOESER: Speculation.

21 THE WITNESS: So, again, it's a
22 bit of a hypothetical.

23 I think that it, again, depends
24 on the particular clinical situation
25 for that decision. In some cases

1 weighing risk and benefit, again,
2 needs to have a foundation of the
3 scientific integrity of those choices.

4 QUESTIONS BY MR. ERCOLE:

5 Q. Would you agree that doctors
6 are obligated to make an independent medical
7 determination of whether to prescribe opioids
8 to patients?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: It is their job
11 to make medical decisions on behalf of
12 the benefit of the patient.

13 QUESTIONS BY MR. ERCOLE:

14 Q. And in fact, it's an ethical
15 responsibility, right?

16 A. And it is an ethical
17 responsibility to make that decision. It's
18 also an ethical responsibility to not make
19 decisions that would overtly harm a patient
20 or are known to harm a patient.

21 Q. Would you agree that doctors
22 must be familiar with the labels of the
23 medicines they prescribe before writing a
24 prescription for such medicines?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: In terms of how
2 physicians manage their patients and
3 the information they rely on, most
4 physicians have been trained and are
5 able to read into the medications that
6 they're using.

7 They also attend continuing
8 medication -- pardon me, medical
9 education programs to attempt to stay
10 on top of the new medications that are
11 coming out.

12 QUESTIONS BY MR. ERCOLE:

13 Q. All right. So let me just ask
14 my question because I think it was perhaps a
15 little bit more simpler than that.

16 My question was: Would you
17 agree that doctors must be familiar with the
18 labels of the medicines they prescribe before
19 writing a prescription for those medicines?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: I believe they
22 should be familiar with the
23 information that's in that label,
24 that's correct.
25

1 QUESTIONS BY MR. ERCOLE:

2 Q. Fair enough.

3 And if they're not familiar
4 with the information in that label, would you
5 agree that their conduct or behavior falls
6 below the proper standard of care?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: Yeah, my scope of
9 my opinion is not intended to have an
10 opinion about a particular physician's
11 behavior in this case.

12 It is about whether a certain
13 physician has relied on the scientific
14 evidence in making that decision.

15 QUESTIONS BY MR. ERCOLE:

16 Q. Okay. I'm going to -- because
17 I'm -- our deposition here, I mean, I'm going
18 to ask the questions, and I appreciate your
19 response about what your opinion is and
20 isn't.

21 But with respect to this
22 particular question, which is, if a physician
23 writes a prescription for an opioid medicine
24 without being familiar with the information
25 in the label of that medicine, would you

1 agree that that conduct falls below the
2 proper standard of care for a physician?

3 MR. LOESER: Objection. Form.

4 It's outside the scope of his opinion,
5 and it's asked and answered.

6 THE WITNESS: I would say in
7 addition to my prior response that the
8 physician has responsibility to get as
9 much information about that medication
10 as possible that potentially exceeds
11 what is in the label.

12 QUESTIONS BY MR. ERCOLE:

13 Q. Okay. Again, with all due
14 respect, sir, I'm not sure you're answering
15 my question, which is, if a doctor is not
16 familiar with the information in the label of
17 a medicine he or she prescribes, would you
18 agree that that conduct, that decision, falls
19 below the standard of care for doctors?

20 MR. LOESER: Objection. Form.

21 You're asking a question that's
22 outside the scope of his testimony,
23 and it's asked and answered.

24 THE WITNESS: Yeah, I have no
25 other comment on that.

1 QUESTIONS BY MR. ERCOLE:

2 Q. You can't answer that question?

3 A. I've answered the question.

4 Q. Do you know what a box warning
5 is for an opioid medicine?

6 A. Yes, I do. Excuse me.

7 Q. Should doctors be familiar with
8 box warnings before they prescribed -- before
9 they prescribe opioid medicines?

10 A. Yes, they should.

11 Q. Would you agree that doctors
12 must be familiar with the approved
13 indications of opioid medicines before they
14 write a prescription?

15 MR. LOESER: Objection. Form.

16 THE WITNESS: I believe
17 physicians should know indicated
18 positions of -- and indications for
19 the medications; however, they should
20 also be up to date at an emerging
21 information about the effects and
22 harms of such medications.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Would you agree that the risks
25 associated with opioids have been well-known

1 for at least a century?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: Which risk are
4 you -- I'm not supposed the questions,
5 sorry. I'm unclear about the
6 question.

7 QUESTIONS BY MR. ERCOLE:

8 Q. Sure.

9 Would you agree that the risk
10 of addiction associated with opioids has been
11 known for at least a century?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: The knowledge of
14 opioid-induced addiction has been
15 known, certainly in this country, for
16 a long time. Certainly there's
17 examples from the Civil War times with
18 morphine, that's correct.

19 QUESTIONS BY MR. ERCOLE:

20 Q. And would you agree students in
21 medical school learn that opioids are
22 addictive medicines?

23 MR. LOESER: Objection. Form.

24 THE WITNESS: I believe medical
25 students learn a full range of the

1 actions of opioids that include the
2 risk of addiction.

3 QUESTIONS BY MR. ERCOLE:

4 Q. And medical students are taught
5 that opioids are Schedule II controlled
6 substances?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: I guess the
9 context of which opioids are being
10 considered, there are Schedule II
11 opioids and there's Schedule III and
12 IV.

13 QUESTIONS BY MR. ERCOLE:

14 Q. Sure.

15 But would you agree that
16 medical students are taught that Schedule II
17 controlled substances include substances that
18 have a high potential for abuse and
19 addiction?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: I'm not sure I
22 can account for all medical schools
23 and -- in their curriculum that all
24 medical students are aware that potent
25 opioids are Schedule II medications,

1 but in general, the relationship
2 between potency and potential for
3 addiction is taught.

4 QUESTIONS BY MR. ERCOLE:

5 Q. Would you agree that there are
6 different types of opioid medicines?

7 A. Yes.

8 Q. Some are short-acting opioids;
9 fair to say?

10 A. Or might call it immediate
11 release formulations.

12 Q. Others are long-acting opioids?

13 A. There are various products that
14 are proposed to be sustained release or
15 long-acting.

16 Q. Different delivery systems
17 between opioid medicines?

18 A. It's my understanding that
19 different manufacturers have proposed that
20 they have different formulations of their
21 medications that can influence their release
22 properties, that's correct.

23 Q. Different FDA-approved
24 indications for opioid medicines; would you
25 agree with that?

1 A. I believe that opioid
2 medications do have different FDA approval
3 for use.

4 In addition, it should be noted
5 that the number of opioid that are used and
6 their indications are much smaller than the
7 actual clinical use of opioids in practice.
8 So-called off-label use.

9 Q. Is there -- and doctors are
10 free to prescribe opioid medicines off label,
11 correct?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: Again, based on
14 the weight of evidence as they might
15 use them for indications that are
16 thought of as, again, back to the risk
17 and benefit in these areas of pain
18 control.

19 So, for example, in the
20 treatment of cancer pain, for example.

21 QUESTIONS BY MR. ERCOLE:

22 Q. But doctors have the
23 independent ability to decide whether to
24 prescribe an opioid medicine for an on-label
25 purpose or an off-label purpose, correct?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: Well, it is a
3 practice of physicians to not restrict
4 the use of a particular medication
5 given that there is scientific
6 evidence for its use following the
7 approval of its use.

8 QUESTIONS BY MR. ERCOLE:

9 Q. Would you agree that the
10 scientific data regarding opioid medications
11 has changed over time?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: I agree that it
14 has -- the scientific evidence
15 develops, as does clinical evidence.

16 QUESTIONS BY MR. ERCOLE:

17 Q. Fair to say it's continuing to
18 evolve to this day?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: It's true that it
21 continues to evolve to this day,
22 that's correct.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Would you agree that in some
25 patients opioids may be an effective

1 treatment for chronic noncancer pain?

2 MR. LOESER: Objection. Form.

3 THE WITNESS: The overwhelming
4 evidence is that continuous or chronic
5 opioid use for chronic noncancer pain
6 is essentially unproven.

7 It's my opinion that the vast
8 majority of chronic noncancer pain,
9 like pain from chronic back pain,
10 headache, centralized pain syndromes
11 like fibromyalgia, there's no
12 significant, strong evidence that
13 they're effective under those
14 conditions.

15 In addition, there's great
16 amount of evidence that there's been
17 great harm with the use of these
18 chronic opioids in those conditions.

19 QUESTIONS BY MR. ERCOLE:

20 Q. And so my question was a little
21 different. I think your answer talked about
22 the vast majority of patients --

23 A. Uh-huh.

24 Q. -- and my question was
25 different. It was: In some patients, would

1 you agree that opioids may be an effective
2 treatment for chronic noncancer pain?

3 MR. LOESER: Objection. Form,
4 and asked and answered.

5 THE WITNESS: My opinion is
6 that there's very few chronic
7 noncancer pain conditions that would
8 be effectively and safely managed by
9 opioids.

10 In my experience clinically, I
11 estimate that maybe to be about
12 5 percent.

13 QUESTIONS BY MR. ERCOLE:

14 Q. And that's based upon your
15 clinical experience?

16 A. It's based not only on my
17 clinical experience, it's the weight of
18 evidence, of knowing that the vast majority
19 of pain, chronic painful conditions, are
20 noncancer, such as back pain, as I mentioned
21 before. Headache, very common. Centralized
22 pain syndromes are essentially unresponsive
23 and -- or the risk versus benefit is not
24 there.

25 There's -- these smaller

1 percentages, you know, these are conditions
2 that are well-known. They're chronic,
3 painful conditions. But again, opioids would
4 not be the first line of therapy for them.

5 Chronic opioids would possibly
6 be considered as -- in these candidate areas
7 maybe as third-tier therapies, again, because
8 of limited data to support their use and also
9 the risk of harm that may come from their
10 continuous use.

11 Q. What are those candidate areas?

12 A. I'll just refer to my report
13 here. Just a minute.

14 They -- it involves such thing
15 as pain from multiple sclerosis, sickle cell
16 disease, postherpetic neuralgia, pain from
17 spinal cord injury, for example. Those are
18 some examples. It's not intended to be a
19 complete list but examples.

20 Q. Sitting here today, could you
21 give me a complete list?

22 A. Those are the most common ones
23 that come to my mind that I've certainly
24 encountered in my practice and that are in
25 the literature.

1 Q. Okay. So again, let me ask my
2 question.

3 Sitting here today, can you
4 give me a complete list?

5 MR. LOESER: Objection. Asked
6 and answered.

7 THE WITNESS: What I've
8 provided is probably my best --
9 provides the best examples of that
10 list, and I don't think I would go
11 beyond that.

12 QUESTIONS BY MR. ERCOLE:

13 Q. So would you agree that -- are
14 you familiar with the concept of breakthrough
15 pain?

16 A. The concept of breakthrough
17 pain, as I understand it, was introduced in
18 the management of cancer pain, and there's
19 been some knowledge and clinical experience
20 around that where breakthrough pain in cancer
21 patients have been managed with
22 immediate-release formulations of opioids or
23 other medications, that's correct.

24 Q. Would you agree that as a
25 result of -- strike that.

1 Would you agree that opioids
2 can be an effective treatment option for
3 acute pain?

4 A. Yeah, absolutely.

5 I think opioids -- you know,
6 again, in their indication we use them
7 frequently in the hospital. They may not be
8 the only best therapy, and there may be
9 nonopioid therapies that are better, but
10 opioids remain one of our most potent tools
11 to treat acute pain and end-of-life and
12 cancer pain.

13 Q. And opioids -- fair to say,
14 opioids may be an appropriate treatment for
15 postsurgical pain?

16 A. They're common -- opioids are
17 used commonly in postsurgical pain; however,
18 part of my own career path and evidence has
19 been to introduce nonopioid therapy,
20 so-called multimodal therapies, to reduce the
21 requirements of opioids and improve, frankly,
22 the outcome of patients postsurgically.

23 Q. And I appreciate that that's
24 your career path, but my question was a
25 little bit different, which is that fair to

1 say that opioids may be an appropriate or
2 effective treatment for postsurgical pain in
3 some patients?

4 MR. LOESER: Objection. Asked
5 and answered.

6 THE WITNESS: Yeah.

7 Again, I have the same --
8 opioids are potent analgesics that
9 have been used effectively to treat
10 postsurgical pain.

11 QUESTIONS BY MR. ERCOLE:

12 Q. So fair to say that at least
13 with respect to your opinion, you would
14 agree -- strike that.

15 Would you agree that addiction
16 is not something that's specific to opioids,
17 that it can occur with other medications?

18 MR. LOESER: Objection. Form.
19 Outside the scope of his opinion.

20 THE WITNESS: Sorry, could you
21 restate that question? Sorry about
22 that.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Sure.

25 Do you agree that addiction can

1 occur with other medications?

2 MR. LOESER: Same objection.

3 QUESTIONS BY MR. ERCOLE:

4 Q. Strike that. I'll re -- that
5 was a bad question.

6 Would you agree that addiction
7 can occur with medications other than
8 opioids?

9 MR. LOESER: Same objection.

10 THE WITNESS: I'm aware that
11 addiction and sometimes now called
12 substance use disorders are associated
13 with a number of nonopioid compounds.

14 QUESTIONS BY MR. ERCOLE:

15 Q. Are you an addiction
16 specialist, sir?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: As part of my --
19 my clinical responsibilities and work
20 over the years, I've needed to be able
21 to obtain additional education and
22 consultation in addiction medicine to
23 safely manage many of our patients
24 that we see. We also then collaborate
25 with addiction specialists when

1 needed.

2 That said, I wouldn't
3 characterize myself as an addiction
4 specialist.

5 QUESTIONS BY MR. ERCOLE:

6 Q. Thank you.

7 A. I might add that my scope of
8 testimony and focus is -- does not cover the
9 topics like addiction where I believe there
10 will be other testimony specifically around
11 addiction.

12 Q. Would you agree that doctors
13 consider many factors when determining
14 whether to write an opioid prescription?

15 MR. LOESER: Objection. Form.
16 Calls for speculation.

17 THE WITNESS: Yeah.

18 I would say that physicians,
19 again, need to weigh the evidence that
20 their decision around opioid
21 prescribing for pain is supported by
22 the scientific literature and then,
23 again, weighed between the risks
24 versus potential benefits for that
25 patient.

1 QUESTIONS BY MR. ERCOLE:

2 Q. Well, how about this: You've
3 written prescriptions, opioid prescriptions,
4 before, correct?

5 A. That is correct.

6 Q. Okay. When determining whether
7 to write those prescriptions, did you
8 consider the risks of the medicine?

9 A. You're talking about opioids?

10 Q. Yes.

11 A. Okay. Absolutely.

12 Q. The medical history of the
13 patient, consider that?

14 A. So in consideration of writing
15 a prescription, the question is, to myself or
16 other physicians, is whether this will
17 benefit the patient.

18 In the setting of my clinical
19 context, in the inpatient setting, we're
20 often focused on decisions of a patient
21 coming in with high-dose opioids and needing
22 to continue or provide other medications to
23 avoid opioid withdrawal. And it's in that
24 context that I -- we often have the biggest
25 challenge.

1 Q. Do you recall my question, sir?

2 A. You asked whether I -- maybe
3 you should repeat it. Thank you.

4 Q. Fair enough.

5 In writing a prescription --

6 A. Yes.

7 Q. -- for opioids for a patient,
8 do you consider the patient's medical
9 history?

10 A. Absolutely.

11 Q. Do you consider the patient's
12 age?

13 A. Yes.

14 Q. Do you consider the patient's
15 level of pain?

16 A. Yes.

17 Q. Do you consider the medical
18 literature available at the time?

19 A. Of course.

20 Q. Do you consider any genetic
21 predispositions that -- or issues the patient
22 may have?

23 A. Well, specific to genetic
24 predis -- pardon me, predispositions,
25 currently we do not have the capacity to

1 screen patients, at least in our medical
2 center, for variations in drug metabolism and
3 what impact that -- so in that regards, no.

4 Q. How about do you consider
5 whether or not the prescription will be
6 reimbursed by the patient's insurance
7 company?

8 MR. LOESER: Objection. Form.
9 And obviously we're well outside the
10 scope of his report in this case.

11 THE WITNESS: Yeah, I don't --
12 I don't know about that.

13 QUESTIONS BY MR. ERCOLE:

14 Q. I'm asking you, sir, whether
15 you, in writing a prescription for opioid
16 medicines, do you consider the -- whether or
17 not the prescription may be reimbursed by an
18 insurance company?

19 MR. LOESER: Same objection.

20 THE WITNESS: We -- part of our
21 consult service, we'll make
22 recommendations independent of what
23 financial impact or reimbursement
24 impact that has within the
25 institution, per se.

1 But this is, again, wholly
2 outside the scope of my report at this
3 point.

4 QUESTIONS BY MR. ERCOLE:

5 Q. Well, with all due respect,
6 we'll disagree on that.

7 The --

8 MR. LOESER: Actually, it is
9 outside the scope --

10 MR. ERCOLE: Okay.

11 MR. LOESER: -- of the report.

12 MR. ERCOLE: Again, we'll
13 disagree on that.

14 QUESTIONS BY MR. ERCOLE:

15 Q. Have you -- when determining
16 whether to write a prescription for opioids,
17 do you consider the patient's ability to pay?

18 MR. LOESER: Same objections,
19 and has nothing to do with the scope
20 of his report.

21 THE WITNESS: I do not consider
22 a patient's ability to pay in making
23 decisions about analgesic care for
24 patients.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. You have -- I think you
3 testified you have prescribed opioids for
4 patients with chronic pain, correct?

5 A. That is correct.

6 Q. And can you give me examples of
7 the types of conditions that those patients
8 had that -- for which you prescribed opioids?

9 A. Sure.

10 Prescribing opioids in the
11 inpatient setting, typically patients will --
12 for instance, a cancer patient who is failing
13 outpatient management, we'll review their
14 medication list and determine what their
15 medication history is, including any
16 analgesic therapies, as well as any other
17 techniques or interventions that they may
18 be -- have received in the past.

19 So we received the medical
20 record. We speak with them, examine them,
21 look at their pharmacy.

22 We also review the CURES
23 report, the prescription medication reporting
24 system, to understand whether what they have
25 prescribed is in alignment with what they're

1 actually registered to receive.

2 Based on those decisions, we
3 would initially consider that they continue
4 to take their medications -- that may include
5 opioids and immediate-release or
6 sustained-release formulations -- initially
7 as we attempt to make their assessment for
8 pain management.

9 There's -- at times we've had
10 patients that have been on extremely high
11 doses, and so we go back and talk to them
12 about how they ended up there. If there's
13 other physicians that have been involved in
14 prescribing, we would try to contact them.

15 Does that -- I'm sorry.

16 Q. Have you prescribed opioids for
17 chronic noncancer pain?

18 MR. LOESER: Objection. Asked
19 and answered. At some length.

20 THE WITNESS: Again, over the
21 total assessment of managing such
22 patients that come into the hospital,
23 for instance, that have failed
24 outpatient management with -- and are
25 on high dose or even modest dose

1 around-the-clock opioid therapy, our
2 initial step is to prevent the patient
3 from withdrawing and/or use other
4 adjuncts to blunt that.

5 It's been my experience that
6 patients who have been on
7 around-the-clock opioids that have
8 been asked to taper off of them have
9 failed, and often they may come into
10 the hospital in withdrawal, and we're
11 attempting to manage that.

12 QUESTIONS BY MR. ERCOLE:

13 Q. Have you prescribed opioids for
14 patients with chronic neck pain?

15 A. Again, there's been patients
16 that have been admitted to the hospital
17 already being prescribed opioids for their
18 chronic neck pain in which we've continued
19 those medications until we can have a full
20 assessment of their pain management plan.

21 Q. How about patients with -- same
22 with patients with chronic back pain as well?

23 A. Includes, yeah, patients with
24 chronic back pain.

25 Q. Would you agree that doctors

1 can take steps to minimize risk associated
2 with opioids and better ensure that opioids
3 are having their desired effect?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: So, sorry, could
6 you repeat that? I didn't catch --

7 QUESTIONS BY MR. ERCOLE:

8 Q. Sure.

9 Would you agree that doctors
10 can take steps to minimize risk associated
11 with opioids and better ensure that opioids
12 are having their desired effect?

13 MR. LOESER: Objection. Form.
14 Assumes facts not in evidence.

15 THE WITNESS: I think the
16 decision to make -- to prescribe
17 opioids or continue opioids involves a
18 series of decisions, again, of whether
19 the prior prescription of opioids was
20 satisfying the goals for that
21 particular patient.

22 In the patients that we're
23 caring for, we often see that a
24 patient's pain is not being
25 well-managed, and so we're left with

1 the task to consider other options,
2 other nonopioid options, for such
3 patients.

4 And so in that regards,
5 optimizing opioid therapy for
6 patients, from our perspective, often
7 involves reducing the dose -- or
8 strategies to reduce the dose for
9 their chronic management.

10 I'd like to take a break at
11 this point.

12 MR. LOESER: Sure.

13 THE WITNESS: Could I take a
14 break at this point?

15 MR. ERCOLE: Sure.

16 THE WITNESS: I'd appreciate
17 it. Thank you.

18 VIDEOGRAPHER: We are now going
19 off the record, and the time is
20 1:25 p.m.

21 (Off the record at 1:25 p.m.)

22 VIDEOGRAPHER: We are now going
23 back on the record, and the time is
24 1:35 p.m.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. Dr. Schumacher, would you agree
3 that the ceiling of opioids is high compared
4 to other analgesics?

5 MR. LOESER: Objection. Form.

6 THE WITNESS: A ceiling effect
7 of opioid action on patients is
8 relative to that particular patient's
9 context.

10 So I don't believe there's a
11 way to safely or accurately describe a
12 milligram-to-milligram comparison of
13 opioid versus nonopioid medications,
14 if that was your question.

15 (Schumacher Exhibit 5 marked
16 for identification.)

17 QUESTIONS BY MR. ERCOLE:

18 Q. Sure. Why don't we mark this
19 as Exhibit 5, I think.

20 Sir, this document is titled
21 "The Prescription Opioid Epidemic:
22 Challenges and Opportunities for California
23 Pain Physicians."

24 Do you see that?

25 A. Yes, I do.

1 Q. Did you author this document?

2 A. I coauthored it with Dr. Ramana
3 Naidu.

4 Q. And that was in September 20,
5 2016?

6 A. That's correct.

7 Q. If you turn to the third page.

8 MR. LOESER: Take your time to
9 review the document.

10 QUESTIONS BY MR. ERCOLE:

11 Q. Do you see on the third page --
12 I'm just trying to use your words -- where
13 it's the second to the last sentence of that
14 page. It says, "While the ceiling of opioids
15 is high compared to other common analgesics,
16 there is a ceiling."

17 Do you see that?

18 A. Yes, I do.

19 Q. So would you agree with me that
20 the ceiling of opioids is high compared to
21 other common analgesics?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: Right.

24 So the context of that
25 paragraph, of course -- it starts with

1 "Despite extremely high doses of
2 opioids in individuals, there appears
3 to -- not to be a proportionate
4 increase in benefit. With the
5 increasing number of opioid-tolerant
6 patients that come in for surgery, it
7 is a daily occurrence to see a patient
8 taking over a thousand oral morphine
9 equivalents continue to have severe
10 pain."

11 So in the context of a patient
12 with a -- developing opioid tolerance,
13 somehow they've managed to survive to
14 that point, and so we're then faced to
15 manage those patients.

16 And in this case, this
17 particular example, this particular
18 patient with a thousand morphine
19 equivalents, while that particular
20 patient's ceiling apparently is high
21 and allows them to stay alive, if you
22 take that same dose with someone else,
23 they may not survive.

24 QUESTIONS BY MR. ERCOLE:

25 Q. Sir, are the words you used in

1 this article "the ceilings" -- "the ceiling
2 of opioids is high compared to other common
3 analgesics," are those words accurate?

4 MR. LOESER: Objection. Form.
5 And you read part it and not all the
6 sentence.

7 THE WITNESS: You're reading
8 the words accurately, although the
9 context of the authors has a meaning
10 relative to this example of a patient
11 coming in with a thousand milligrams a
12 day.

13 QUESTIONS BY MR. ERCOLE:

14 Q. Fair enough.

15 You have to understand the
16 context of that statement to under -- to
17 truly interpret and understand the statement
18 itself, right?

19 A. That's my point.

20 Q. Okay. Are you giving an
21 opinion in this case as to what caused an
22 opioid abuse epidemic, an opioid misuse
23 epidemic, an opioid -- whatever you want to
24 call it.

25 Are you giving any opinion in

1 this case as to what caused an opioid
2 epidemic or opioid-related problems in Ohio?

3 MR. LOESER: Objection. Form.

4 You're asking the witness to
5 conduct what sounds like a legal
6 analysis.

7 MR. ERCOLE: I'm asking for his
8 opinion, so I think he can answer that
9 question.

10 THE WITNESS: The base --

11 MR. LOESER: But on a medical,
12 factual or legal question?

13 MR. ERCOLE: If you can't
14 answer the question, you can say you
15 can't answer the question. So I'll
16 repeat the question.

17 QUESTIONS BY MR. ERCOLE:

18 Q. Are you giving an opinion in
19 this case as to what caused an opioid
20 epidemic or opioid-related problems in Ohio?

21 MR. LOESER: Same objection.

22 THE WITNESS: My understanding
23 of the factors that are involved with
24 the opioid epidemic have commonalities
25 across the United States, including

1 Ohio, and the key driver was the
2 misrepresentation of the safety and
3 efficacy of opioids for chronic
4 noncancer pain.

5 This is a key conclusion that
6 the NASEM committee concluded as well
7 as based on my opinion on this report.
8 I also share that opinion.

9 QUESTIONS BY MR. ERCOLE:

10 Q. So with respect to my question,
11 are you -- I'm just asking: Are you giving
12 an opinion in this case as to what caused an
13 opioid epidemic or opioid-related problems in
14 Ohio?

15 MR. LOESER: Objection.

16 Asked --

17 QUESTIONS BY MR. ERCOLE:

18 Q. I think it's a yes/no response.

19 MR. LOESER: Objection. Asked
20 and answered.

21 THE WITNESS: Relative to
22 Ohio's -- so sorry. Could you repeat
23 it one more time for me, please?

24 QUESTIONS BY MR. ERCOLE:

25 Q. With respect to my question,

1 I'm just asking: Are you giving an opinion
2 in this case as to what caused an opioid
3 epidemic or opioid-related problems in Ohio;
4 yes or no?

5 MR. LOESER: Objection. Same
6 objection. Asked and answered.

7 THE WITNESS: My opinion is
8 broader and encompasses the factors
9 and -- driving factors that affect the
10 opioid epidemic, which includes the
11 state of Ohio.

12 QUESTIONS BY MR. ERCOLE:

13 Q. Have you looked exhaustively at
14 all the possible factors that may have caused
15 the opioid epidemic in Ohio?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: We've examined
18 so-called factors, possible causes
19 of -- more broadly across the United
20 States, including Ohio. And it's my
21 opinion that although these factors,
22 some of which have been involved like
23 with poverty, other social factors,
24 these have existed for years in the
25 United States without an evidence of

1 an opioid epidemic.

2 We believe that the driving
3 force has been this promotion of
4 opioids for noncancer chronic pain.

5 QUESTIONS BY MR. ERCOLE:

6 Q. Right.

7 I understand that's your -- so
8 why don't you -- what are the other factors
9 that you believe contributed to the opioid
10 epidemic in Ohio?

11 MR. LOESER: Objection. Form.
12 Misstates his prior testimony.

13 QUESTIONS BY MR. ERCOLE:

14 Q. Well, let me ask this: Are
15 there other factors that you believe
16 contributed to the opioid epidemic in Ohio?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: I believe that
19 factors that are in existence that
20 could make the opioid epidemic worse
21 were in existence in Ohio as well as
22 other states, and these have to do
23 with the misinformation that
24 physicians had at the time about the
25 safety and efficacy of opioids for the

1 treatment of chronic pain.

2 QUESTIONS BY MR. ERCOLE:

3 Q. Do you recall my question, sir?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: I do recall your
6 question, and my response and my scope
7 of my opinion represents a broad
8 analysis -- a broad opinion that would
9 cover across the United States,
10 including Ohio.

11 QUESTIONS BY MR. ERCOLE:

12 Q. What was my question?

13 MR. LOESER: Objection. Form.

14 Counsel, if you want to repeat
15 your question, go ahead.

16 QUESTIONS BY MR. ERCOLE:

17 Q. I'm happy to repeat it; that's
18 why I asked the question. But I don't think
19 you understand my question.

20 A. Maybe I misunderstood your
21 question.

22 Q. So are there -- I know you've
23 identified marketing.

24 Are there factors other than
25 marketing that you believe contributed to the

1 opioid epidemic in Ohio?

2 MR. LOESER: Objection.

3 Mischaracterizes his prior testimony.

4 THE WITNESS: I suspect that --
5 well, suspect, scratch that.

6 There's been a number of
7 conditions that have been identified
8 across the country which I believe
9 also apply to Ohio's case, which
10 includes a lower -- let's see how to
11 say this -- that includes difficult
12 economic circumstances that may limit
13 the access to advanced medical care,
14 may limit access to advanced
15 approaches or even historical
16 approaches that have been approved and
17 successful, such as multidisciplinary
18 pain management programs for the
19 treatment of noncancer chronic pain.

20 Those are the two that come to
21 my mind as the top.

22 QUESTIONS BY MR. ERCOLE:

23 Q. Any other factors?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: Yeah. That's all

1 I have to say with that.

2 QUESTIONS BY MR. ERCOLE:

3 Q. Okay. Why don't you take a
4 look at the document that I've shown you,
5 Exhibit 5.

6 A. Yes.

7 Q. So if you turn to the second to
8 last page.

9 A. Second to last page.

10 Q. Sure.

11 A. Yep. Okay. Got it.

12 Q. So these are -- this is a
13 document that you coauthored, right?

14 A. That's correct.

15 Q. And it says, "So finally" --
16 tell me if I'm reading this correctly --
17 "where did the opioid epidemic come from?"

18 Do you see that?

19 A. Yes, I see that.

20 Q. And it says, "To put it
21 succinctly, from the following."

22 Do you see that?

23 A. Exactly.

24 Q. And that --

25 A. But I can read -- if you'd like

1 me to, I can read each of those points.

2 Q. Okay. Well, I mean, I'm
3 happy -- I'm going to walk through them with
4 you.

5 A. Sure, go ahead.

6 Q. So the first one is a society
7 disproportionately fearful of suffering.

8 Am I reading that correctly?

9 A. That's correct.

10 Q. So you would agree that that
11 was a factor in contributing to or causing
12 the opioid epidemic, correct?

13 A. It is a condition in which a
14 driving force in some ways took advantage of,
15 I think, the society.

16 Q. Okay. And the next bullet is
17 patient satisfaction surveys.

18 Do you see that?

19 A. That's right.

20 Q. That would be another
21 circumstance from which the opioid epidemic
22 sprung, correct?

23 A. Under the condition that
24 patient satisfaction scores were driving the
25 prescribing behavior of physicians or in

1 institutions, with the idea that responding
2 to patient's request for pain was only being
3 responded to with the use of an opioid rather
4 than other medications, for example.

5 Q. Reckless prescribing, you list
6 that next as a factor that could cause --

7 A. Right.

8 Q. -- or contributed to the opioid
9 epidemic, right?

10 A. And again, I would put that in
11 the category that reckless relative to
12 physicians that were misdirected by the
13 pharmaceutical industry that it was safe and
14 effective to write higher and higher opioid
15 dosing for patients with chronic noncancer
16 pain. I would characterize that as reckless
17 prescribing.

18 Q. And is it your belief then that
19 physicians played no role with respect to --
20 strike that.

21 Is it your belief that
22 physicians bear no responsibility for
23 contributing to the opioid epidemic in this
24 country?

25 MR. LOESER: Objection. Form.

1 Misstates his prior testimony.

2 THE WITNESS: The scope of my
3 report was not to focus on an opinion
4 of a particular physician's behavior.

5 QUESTIONS BY MR. ERCOLE:

6 Q. Fair enough.

7 And I understand that you don't
8 address that in your report, but you are
9 purporting to give an opinion regarding the
10 cause of the opioid epidemic, right?

11 MR. LOESER: Objection. Form.
12 Misstates the opinions that he's
13 provided in his report.

14 THE WITNESS: My opinion is
15 that the driving force for this opioid
16 epidemic was the misrepresentation of
17 the use of chronic opioids in chronic
18 noncancer pain, which drove -- through
19 the misrepresentation drove physicians
20 who otherwise had great concern about
21 addiction for their patients to
22 believing that these new agents, for
23 example, the OxyContin formulation
24 from Purdue, was safe and effective,
25 with a low-degree risk of addiction

1 and other difficulties.

2 QUESTIONS BY MR. ERCOLE:

3 Q. And when you say "driving
4 force," what do you mean by that?

5 A. Well, if you look at most of
6 these, a society disproportionately fearful,
7 or patient satisfaction surveys, or lack of
8 formal education on pain, none of these
9 independently would, in my opinion, have
10 generated an opioid epidemic without the
11 introduction and promotion, aggressive
12 promotion, of opioid analgesics in the use of
13 chronic noncancer pain.

14 Q. So the next factor that you
15 identify as causing or contributing to the
16 opioid epidemic is the fragmenting American
17 patient/doctor relationship.

18 Do you see that?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: Yes.

21 Sorry. That's read correctly.

22 QUESTIONS BY MR. ERCOLE:

23 Q. Okay. The next factor that you
24 identify is lack of formal education on pain
25 and opioids; is that correct?

1 A. I see that. You've read it
2 correctly.

3 Q. You wrote that, right?

4 A. It was -- again, this was a
5 collaborative effort with Dr. Ramana Naidu
6 and myself.

7 Q. The next bullet is lack of
8 formal research on the risks and benefits of
9 chronic opioid use.

10 Do you see that?

11 A. That's read correctly.

12 Q. That's another factor that you
13 identified as causing or contributing to the
14 opioid epidemic in this article?

15 MR. LOESER: Objection. Form.

16 THE WITNESS: Again, I wouldn't
17 phrase it in the way you've said it,
18 that if we go back to the start of
19 this, it was meant to be a provocative
20 statement as where did opioid epidemic
21 come from.

22 And as you see as we work our
23 way down, we land on pharmaceutical
24 direct-to-consumer marketing,
25 direct-to-prescriber marketing.

1 Again, it's my opinion that
2 that represents the driving force for
3 the opioid epidemic.

4 QUESTIONS BY MR. ERCOLE:

5 Q. So the -- I believe you -- the
6 pain management and regulatory strategies
7 report that you've mentioned --

8 A. Yes.

9 Q. -- that was published in 2017,
10 correct?

11 A. That's correct, yes.

12 Q. And so this document was
13 published in -- or authored in September
14 of 2016, correct? If you look at the first
15 page.

16 MR. LOESER: Objection. Form.

17 THE WITNESS: September, yes.

18 QUESTIONS BY MR. ERCOLE:

19 Q. Right.

20 A. That's correct, yes.

21 Q. So fair to say that you were
22 including -- well, had you reviewed any
23 marketing materials by any company when you
24 authored this document, Exhibit 5?

25 MR. LOESER: Objection. Form.

1 QUESTIONS BY MR. ERCOLE:

2 Q. I'll rephrase the question.

3 When you authored this
4 document, Exhibit 5, in September of 20 --
5 2016, had you reviewed any marketing
6 materials from any pharmaceutical company?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: I can't recall.

9 QUESTIONS BY MR. ERCOLE:

10 Q. So sitting here today, you
11 can't identify a single marketing material or
12 document that you would have reviewed in
13 publishing an article on the Internet in
14 September of 2016 saying that pharmaceutical
15 marketing is a cause of the opioid epidemic?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: Again, my
18 statement in this article poses the
19 question and lists potential factors.
20 It -- that's what I have to say.

21 QUESTIONS BY MR. ERCOLE:

22 Q. And have you done any -- well,
23 let me ask this: How about the FDA -- strike
24 that.

25 How about FDA policy? Was that

1 a factor in causing or contributing to the
2 opioid epidemic in Ohio?

3 MR. LOESER: Objection. Form,
4 and outside the scope of his report.

5 THE WITNESS: My report was --
6 and scope does not involve making
7 opinion about the FDA's process for
8 drug approval.

9 QUESTIONS BY MR. ERCOLE:

10 Q. Did you consider that?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: In what way?

13 QUESTIONS BY MR. ERCOLE:

14 Q. Did you consider that in
15 authoring the opinions that you're giving,
16 that -- you just said it was outside the
17 scope of your opinion. So is it fair to say
18 that you're not giving an opinion on that
19 issue?

20 A. My opinion is based on the lack
21 of scientific integrity that underpinned the
22 claims made by the pharmaceutical industry
23 that opioids, chronic opioids, were safe and
24 effective for the treatment of chronic pain.

25 I'm not making an opinion on

1 the process of the FDA.

2 Q. Are you giving -- did you
3 consider whether DEA policy caused or
4 contributed to the opioid epidemic in Ohio?

5 MR. LOESER: Objection. Form.
6 Outside the scope of his report.

7 QUESTIONS BY MR. ERCOLE:

8 Q. Let me ask this: Is it outside
9 the scope of your report as to whether or not
10 you considered whether DEA policy caused or
11 contributed to the opioid epidemic in Ohio?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: That was outside
14 the scope of my report.

15 QUESTIONS BY MR. ERCOLE:

16 Q. Fair enough.

17 And is it outside the scope of
18 your report as to whether or not you
19 considered whether FDA policy caused or
20 contributed to the opioid epidemic in Ohio?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: Again, it was
23 outside the --

24 MR. LOESER: Compound.

25 THE WITNESS: -- scope of my

1 report.

2 QUESTIONS BY MR. ERCOLE:

3 Q. And is it fair to say -- is it
4 outside the scope of your report as to
5 whether or not you considered whether managed
6 care or reimbursement policies by managed
7 care entities caused or contributed to the
8 opioid epidemic in Ohio?

9 MR. LOESER: Objection. Form.
10 It's outside the scope of his report.

11 THE WITNESS: Yeah, I -- that
12 was outside the scope of my report.

13 QUESTIONS BY MR. ERCOLE:

14 Q. Is it outside the scope of your
15 report as to whether or not you considered
16 whether pill mills caused or contributed to
17 the opioid epidemic in Ohio?

18 MR. LOESER: Objection. Form.
19 Outside the scope of his report.

20 THE WITNESS: Yeah. I do not
21 consider that. That was outside the
22 scope of my report.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Was it outside the scope of
25 your report as to whether or not actions or

1 inactions taken by local government caused or
2 contributed to the opioid epidemic in Ohio?

3 MR. LOESER: Objection. Form.

4 THE WITNESS: Within my
5 opinion, there was evidence within the
6 literature of the influence of
7 pharmaceutical industries to try to
8 change certain rules at the state
9 level having to do with the approval
10 and prescribing practices of opioids.

11 But otherwise, the rest is --
12 otherwise, your question is outside
13 the scope of my report.

14 QUESTIONS BY MR. ERCOLE:

15 Q. Did you consider whether Summit
16 or Cuyahoga -- excuse me.

17 Did you consider whether Summit
18 or Cuyahoga Counties -- strike that.

19 Did you consider whether Ohio's
20 decision when or when not to implement a PDMP
21 caused or contributed to the opioid epidemic
22 in Ohio?

23 MR. LOESER: Objection. Form.

24 Outside the scope of his report.

25 Assumes facts not in evidence.

1 THE WITNESS: As part of the
2 NASEM report, there was a section in
3 which we examined the pattern of the
4 institution of these prescription
5 medication reporting systems, and so
6 broadly we examined different states'
7 record of that and whether there was a
8 relationship between the institution
9 of those tools for physicians and
10 potential rates of opioid abuse or
11 harm.

12 I do reference the NASEM report
13 in my core opinion, but that is as far
14 as I have. I don't have anything
15 specific for Ohio.

16 QUESTIONS BY MR. ERCOLE:

17 Q. So you don't know one way or
18 the other --

19 A. I can't recall.

20 Q. Let me just -- let me just
21 finish.

22 You don't know sitting here
23 today, one way or another, whether Ohio
24 implemented a PDMP or not?

25 MR. LOESER: Objection.

1 Outside the scope of his report.

2 THE WITNESS: It's outside the
3 scope for the -- your question.

4 QUESTIONS BY MR. ERCOLE:

5 Q. And fair to say you didn't
6 consider the timing of -- strike that.

7 Fair to say you didn't consider
8 whether Ohio implemented a PDMP and, if so,
9 the timing of it in determining whether that
10 contributed or caused the opioid epidemic in
11 Ohio?

12 MR. LOESER: Same objection.

13 THE WITNESS: The context of
14 the prescription medication reporting
15 system has been, in my practice, a
16 tool to try to identify warning signs
17 of patients if they're prescribed
18 something and taking something else.

19 Again, the overall impact of
20 the record is a tool, but I can't
21 recall the details at this time that
22 relate the starting of the -- of that
23 recording program in the state of
24 Ohio.

25

1 QUESTIONS BY MR. ERCOLE:

2 Q. Did you consider whether the
3 misuse by -- strike that.

4 Did you consider whether the
5 misuse of opioids by patients in Ohio caused
6 or contributed to the opioid epidemic there?

7 MR. LOESER: Objection. Form.
8 Outside the scope of his report.

9 THE WITNESS: Again, the core
10 of the opinion was based on a review
11 of the literature that -- pulled from
12 various studies that had been done
13 across the country. I can't recall
14 which of those studies specifically
15 included cohorts from the state of
16 Ohio.

17 QUESTIONS BY MR. ERCOLE:

18 Q. Sir, I'm just trying to
19 understand what you considered and didn't
20 consider --

21 A. Sure.

22 Q. -- in forming the opinions that
23 you're purporting to give in this case.

24 A. Uh-huh.

25 Q. And you agree this case is a

1 serious case, right?

2 A. That's why I'm here.

3 Q. Right.

4 So did you consider, in giving
5 your opinions as to what caused or didn't
6 cause the opioid epidemic, the misuse of
7 opioids by patients in Ohio?

8 MR. LOESER: Objection.

9 Assumes facts not in evidence. It's
10 outside the scope of his report.

11 THE WITNESS: My consideration
12 weighed on the effect of opioids on
13 the entire population of the United
14 States, at least that represented by
15 different study groups as represented
16 in the literature.

17 QUESTIONS BY MR. ERCOLE:

18 Q. Did you consider the factor of
19 misuse of opioids by patients in determining
20 what caused or didn't cause the opioid
21 epidemic in Ohio?

22 And with all due respect, I
23 don't think you've answered that question.

24 MR. LOESER: Objection. Form.
25 Asked and answered several times.

1 THE WITNESS: Again, my opinion
2 is that the factors that are driving
3 the opioid epidemic, as we've
4 discussed, and the powerful force
5 behind the epidemic was driven by the
6 pharmaceutical industry, and those
7 factors and conditions existed across
8 the country and would not be
9 necessarily unique to Ohio.

10 That's my opinion.

11 MR. ERCOLE: Okay. I'll move
12 to strike that response as
13 nonresponsive.

14 MR. LOESER: I object. I
15 believe that answer was responsive and
16 shouldn't be stricken.

17 QUESTIONS BY MR. ERCOLE:

18 Q. Okay. Sir, have you done any
19 quantitative analysis to try to apportion
20 responsibility -- strike that.

21 We talked about -- well, you
22 identify in your September 20, 2016 article a
23 number of factors that, according to this
24 article, you say the opioid epidemic came
25 from, right?

1 A. Actually, the phrasing is
2 "Where did the opioid epidemic come from?"

3 Q. Right.

4 A. "Did it come from the
5 following?"

6 And so it was posed as a
7 question. "To put it succinctly, from the
8 following."

9 Yeah. "So finally, where did
10 the opioid epidemic come from," question
11 mark?

12 "To put it succinctly, from the
13 following."

14 Right.

15 Q. Right.

16 A. So it is intended to engage the
17 reader to consider these conditions, that's
18 correct.

19 Q. Okay. Did you do anything to
20 try to apportion responsibility for the
21 opioid crisis in Ohio according to any of
22 these conditions or factors?

23 MR. LOESER: Objection.

24 Mischaracterizes his prior testimony,
25 and form.

1 THE WITNESS: I have not
2 personally conducted an analysis to
3 apportion responsibility amongst these
4 various factors.

5 (Schumacher Exhibit 6 marked
6 for identification.)

7 QUESTIONS BY MR. ERCOLE:

8 Q. Sir, last document I'm going to
9 show you. Let's mark this as Exhibit 6.

10 MR. LOESER: Take your time.

11 QUESTIONS BY MR. ERCOLE:

12 Q. Sir, we talked before. You
13 have not conducted any survey of
14 physicians -- strike that.

15 You haven't -- sorry.

16 I talked to you before. You
17 have not conducted any survey of prescribers
18 in Ohio to figure out whether they received
19 any misleading marketing by defendants and,
20 if so, whether they relied upon that
21 marketing, correct?

22 MR. LOESER: Objection. Form.
23 Mischaracterizes his testimony.

24 THE WITNESS: What I have
25 testified at this deposition is the

1 evidence provided by counsel that
2 there were call note reports that were
3 describing efforts by the
4 pharmaceutical industry to influence
5 physician prescribing behavior
6 specifically about the use of higher
7 doses of chronic opioids.

8 Given that, I have not
9 conducted any other survey or
10 analysis.

11 QUESTIONS BY MR. ERCOLE:

12 Q. Right.

13 You didn't survey Ohio -- you
14 didn't actually survey -- conduct and
15 initiate and oversee a survey of Ohio
16 prescribers to figure out whether they
17 received any misleading marketing and, if so,
18 whether that influenced their
19 decision-making, right?

20 MR. LOESER: Objection. Form,
21 and asked and answered.

22 THE WITNESS: As best of my
23 knowledge, I have not conducted a
24 survey for -- in the Ohio area to
25 survey physicians in that regards.

1 QUESTIONS BY MR. ERCOLE:

2 Q. So the title of this document
3 is "Surveying Ohio Physicians on Opioid
4 Prescribing Behaviors."

5 Do you see that?

6 A. I do.

7 Q. Have you ever seen this
8 document before?

9 A. I don't recall seeing this
10 document.

11 When was this -- I can't answer
12 the question, sorry.

13 Can I ask a question: When was
14 this published?

15 Q. Yeah.

16 So, unfortunately, we're here
17 to -- for me to ask questions.

18 A. No, that's okay.

19 Q. And I'm just asking whether
20 you've seen it.

21 A. Okay. I can't recall seeing
22 this.

23 Q. You don't recall your counsel
24 ever giving you this document?

25 MR. LOESER: Objection.

1 We're not going to talk about
2 anything that may or may not have been
3 provided to him that's not considered
4 or relied on in his report.

5 THE WITNESS: I don't --

6 MR. LOESER: You can ask him
7 all you want about the document.
8 You're just not going to ask him
9 about --

10 MR. ERCOLE: You can -- just
11 make your objection, and then we'll go
12 from there.

13 MR. LOESER: Well, it's more
14 than making an objection. It's an
15 instruction not to answer questions
16 about communications with counsel.

17 MR. ERCOLE: Then just instruct
18 him not to answer. If that's your --
19 if that's your -- what you're going to
20 argue.

21 MR. LOESER: I'm instructing
22 the witness not to answer. However,
23 you can ask whatever question you want
24 about the document; just don't ask
25 anything that I or my colleagues may

1 have said to the witness about the
2 document.

3 QUESTIONS BY MR. ERCOLE:

4 Q. So you just don't recall seeing
5 this document before?

6 A. That's correct, yeah.

7 Q. Okay. And it's not something
8 you relied on or considered in your report,
9 right?

10 A. I don't recall relying on this
11 document.

12 Q. Can you turn to the -- I just
13 have one or two questions, and then we'll
14 take a break.

15 Can you turn to the page marked
16 SUMMIT_000839799?

17 A. Okay.

18 Q. And -- one second.

19 Do you see where in the summary
20 section on the second sentence it says,
21 "Certain factors such as employer
22 reimbursement policies and pharmaceutical
23 marketing did not overtly change opiate
24 prescribing habits"?

25 Do you see that?

1 A. I see that you've --

2 Q. I read that right.

3 A. -- correctly read that.

4 Q. Yeah. Okay.

5 And if this was a survey
6 conducted by the State of Ohio regarding
7 opioid prescribing behavior and what
8 prescriptions rely upon when prescribing
9 opioids in Ohio, would you have want to have
10 seen this document before issuing your
11 opinions here today?

12 MR. LOESER: Objection. Form.
13 The exhibit lacks foundation, and this
14 is outside the scope of his report.

15 THE WITNESS: Well, before
16 rendering an opinion about two
17 sentences from the summary, I would
18 need to understand the sponsor of this
19 survey. I would need an opportunity
20 to review the survey's methodologies
21 and look at their results prior to
22 stating an opinion.

23 QUESTIONS BY MR. ERCOLE:

24 Q. Fair enough.

25 And at least -- and I'm not

1 asking you to do that now. I'm just saying
2 fair enough.

3 But you have not -- in
4 connection with your opinions in this case
5 that are contained in Exhibit 1, you did not
6 do that, right?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: I don't recall
9 ever reviewing this document before.

10 MR. ERCOLE: Thank you. So can
11 we take a three-minute break?

12 MR. LOESER: Three?

13 MR. ERCOLE: We can take a very
14 short break, if that's okay.

15 THE WITNESS: Yeah, sure.

16 VIDEOGRAPHER: We are now going
17 off the record, and the time is
18 2:13 p.m.

19 (Off the record at 2:13 p.m.)

20 VIDEOGRAPHER: We are now going
21 back on the record, and the time is
22 2:25 p.m.

23 MR. ERCOLE: Dr. Schumacher,
24 thank you for your time with me, at
25 least.

1 That being said, I'm going to
2 pass the witness to one of the
3 codefendants here and reserve the
4 right to ask additional questions as
5 appropriate based upon further
6 developments in the deposition.
7 Thanks.

8 CROSS-EXAMINATION

9 QUESTIONS BY MR. MOONEY:

10 Q. Good afternoon, Dr. Schumacher.

11 A. Good afternoon.

12 Q. My name is Matt Mooney. I'm an
13 attorney with the law firm of Williams &
14 Connolly, and I represent Cardinal Health,
15 one of the defendants in this case.

16 Excuse me. I have a couple of
17 questions just right off the bat.

18 On page 6 of your report, in
19 footnote 1 -- are you there?

20 A. Yes.

21 Q. You write, "'Defendants' as
22 used herein refers to the defendant
23 manufacturers of branded and generic opioid
24 products in the actions brought by plaintiffs
25 Cuyahoga County and Summit County, Purdue

1 Pharma, Endo, Janssen, Teva, Cephalon,
2 Mallinckrodt, Actavis and Allergan."

3 Did I read that correctly?

4 A. You read that correctly.

5 Q. Okay. Are the opinions in your
6 report and that you will offer in this
7 litigation limited to the defendant
8 manufacturers that you list in footnote 1 of
9 your report?

10 A. My opinions that are listed in
11 the report are intended to be a broad-based
12 opinion to the effect of pharmaceutical
13 industry and industry in general that's it's
14 promoted the use of opioids for chronic
15 noncancer pain without scientific evidence.

16 Q. Okay. So is the answer to my
17 question, "no," the opinions in your report
18 and that you intend to offer in this
19 litigation extend to defendants beyond the
20 ones that you list in footnote 1 of your
21 report?

22 A. I have no opinion about that.

23 Q. You don't have an opinion about
24 whether or not your opinion applies to
25 defendants beyond the ones you've listed in

1 your report as defendants; is that true?

2 A. I have not included -- is it
3 Cardinal?

4 Q. It is Cardinal, but I'm asking
5 more -- I'm asking more specifically.

6 A. Uh-huh.

7 Q. Do you have an opinion about
8 any of the other defendants that have been
9 named in this litigation that you intend to
10 offer at trial beyond the ones that you have
11 listed as defendants in footnote 1?

12 A. My opinion is -- for this
13 report is listed here as the defendants in
14 footnote 1.

15 Q. Okay. You don't have a
16 specific opinion about the actions of
17 Cardinal Health as it relates to this
18 litigation, correct?

19 A. I have not -- in my report, I
20 have not provided a focused opinion about
21 Cardinal Health.

22 Q. And you're not going to offer
23 an opinion at trial about Cardinal Health
24 specifically, correct?

25 A. It's my understanding that my

1 testimony is -- within scope relates to this
2 report.

3 Q. Okay. And --

4 MR. LOESER: Counsel, just so
5 the record's clear on these defendants
6 listed here, there's been no effort to
7 identify the affiliates and
8 subsidiaries.

9 So provided you're talking
10 about, you know, within that family
11 the companies, that's what that is
12 intended --

13 QUESTIONS BY MR. MOONEY:

14 Q. When you used the word "Purdue
15 Pharma" in this report, are you referring to
16 Purdue Pharmaceuticals and its affiliates?

17 A. That's correct.

18 Q. Okay. I'm working with that
19 same definition then.

20 A. Okay.

21 Q. To the extent that any of these
22 seven -- eight entities listed have
23 affiliates or subsidiaries that have been
24 listed as defendants, you may offer opinions
25 about them, but not outside of those

1 family --

2 A. I understand. That's correct.

3 Q. That's correct?

4 A. Yes.

5 Q. Okay. So you don't have a
6 specific opinion about the actions of
7 McKesson Corporation that you intend to offer
8 at trial in this litigation?

9 A. Yeah, I -- my scope of opinion
10 is restricted to -- or encompasses the list
11 of defendants shown in footnote 1.

12 Q. Okay. I'm going to run through
13 the rest of the distributors all at once --

14 A. Oh, I see.

15 Q. -- and that way we'll tie it
16 up.

17 A. Okay.

18 Q. So AmerisourceBergen Drug
19 Corporation, Prescription Supply,
20 Incorporated, Miami-Luken and Henry Schein,
21 you do not intend to offer an opinion at
22 trial about any of those defendants in
23 connection with this litigation, correct?

24 A. That is correct.

25 Q. And exhibit -- Deposition

1 Exhibit 3 and 4, which were the Appendix 2
2 and supplemental appendix to your report.

3 Do you have both of those in
4 front of you?

5 A. Exhibit 3 and 4?

6 Q. Exhibit -- I believe those were
7 the two appendix and supplemental appendix.

8 Is that correct?

9 A. That's -- sorry. So what's the
10 question?

11 Q. Just you have them in front of
12 you?

13 A. Yes, I do.

14 Q. Okay. And there is a list of
15 Bates-stamped documents that I understand
16 your counsel provided you in connection --
17 that you considered in connection with your
18 report; is that right?

19 A. That's correct.

20 Q. And if a document is not listed
21 in Appendix 2 and the supplemental appendix,
22 you did not consider it in arriving at your
23 opinion that's reflected in your report,
24 correct?

25 MR. LOESER: And, Counsel, you

1 mean discovery documents?

2 MR. MOONEY: Yes.

3 THE WITNESS: That's what I
4 understand, correct.

5 QUESTIONS BY MR. MOONEY:

6 Q. Okay. One of the opinions in
7 your report is that the medical standard of
8 care for the treatment of chronic and acute
9 pain was changed; is that correct?

10 A. That is -- that is correct.
11 That is in the report.

12 Q. And is that -- that's your
13 opinion, that the standard of care for the
14 treatment of chronic and acute pain changed?

15 A. That is a key point in my
16 report.

17 Q. And --

18 A. And that is my opinion.

19 Q. Okay. And I'm at page third --

20 A. Where are you?

21 Q. Sorry, I'm at page 30 of your
22 report, paragraph 60.

23 A. Oh, okay.

24 Q. Sort of middle of the page --
25 or the paragraph you say, quote, "Physicians

1 were influenced by these efforts, and a
2 cautious and conservative approach to the use
3 of opioids for the treatment of pain was
4 replaced with a much more liberal
5 prescribing -- or was replaced with much more
6 liberal prescribing practices."

7 Is it your opinion that the
8 medical standard of care for the treatment of
9 chronic and acute pain changed, such that a
10 cautious and conservative approach to the use
11 of opioids for the treatment of pain was
12 replaced with a much more liberal -- or with
13 a more liberal prescribing practice?

14 A. It's my opinion that the -- for
15 many physicians influenced by the message
16 that chronic opioids for chronic noncancer
17 pain was safe and effective, I believe that
18 for those physicians their practice changed.

19 And that is also supported by
20 some of the sales rep notes that were -- that
21 I previously stated.

22 Q. And my question is: Is it your
23 opinion that the standard of care change that
24 you believe occurred was a change from a
25 cautious and conservative approach to opioid

1 prescribing to a more liberal prescribing
2 practice?

3 A. Yes.

4 Q. And when did that change occur?

5 A. Sorry, are you asking about
6 when did that -- my opinion change or --

7 Q. When did the standard of care
8 change?

9 A. I see.

10 Based on my report and in my
11 review of the literature, there was a direct
12 relationship, in my opinion, as to the
13 marketing and increased information out for
14 new formulations of sustained-release opioids
15 such as OxyContin starting in 1996 through
16 forward.

17 There appeared to be a dramatic
18 increase -- there was a dramatic increase in
19 prescriptions written for opioids for chronic
20 noncancer pain that in the past had not been
21 realized.

22 Q. And so the standard of care
23 changed starting in 1996 through forward; is
24 that right?

25 A. The standard of care in this

1 context.

2 Q. This context being the
3 treatment of chronic and acute pain?

4 A. Chronic and -- chronic
5 noncancer pain.

6 Q. Okay. Is it also your opinion
7 that under the changed standard of care
8 doctors would prescribe 30-to-60-day supplies
9 of opioids for acute injuries and
10 postoperative recoveries?

11 That's page 9, bullet 15, in
12 case you're --

13 A. Sorry. What was --

14 Q. Page 9, bullet 15.

15 A. Page 9.

16 MR. LOESER: Paragraph 15?

17 MR. MOONEY: 15, yes.

18 QUESTIONS BY MR. MOONEY:

19 Q. You write, "Many in the medical
20 community, including myself, were persuaded
21 at the time that opioids were safe and
22 effective for long-term use. There was less
23 concern about providing 30- or even 60-day
24 supplies for acute injury, postoperative
25 recoveries."

1 Do you see that?

2 A. Yes, I do. You read that
3 correctly.

4 Q. And is it your opinion that the
5 prescription -- prescribing 30-to-60-day or
6 even 60-day supplies of opioids for acute
7 injuries and postoperative recoveries was
8 consistent with the standard of care as it
9 existed when it changed?

10 MR. LOESER: Objection. Form.
11 Mischaracterizes his testimony.

12 THE WITNESS: I included those
13 comments in the report to reflect on
14 what I recalled as a change in
15 practice, if not just what was the
16 state of practice in many instances
17 for the inpatient management of
18 chronic noncancer pain. But in
19 addition, that would extend to
20 potentially postoperative management
21 of pain as well, that's correct.

22 QUESTIONS BY MR. MOONEY:

23 Q. Understood.

24 And is it your opinion that
25 that general practice was consistent with the

1 standard of care for the practice of medicine
2 that you say changed?

3 MR. LOESER: Objection.

4 Mischaracterizes his testimony.

5 THE WITNESS: The
6 characterization of this section in my
7 report is not intended to represent an
8 acceptable or evidence-based
9 acknowledgement of a change in
10 practice but rather reflecting on the
11 practice at the time that was emerging
12 with the use of long-term opioids for
13 certain postoperative, surgical
14 recovery.

15 QUESTIONS BY MR. MOONEY:

16 Q. So you're not offering an
17 opinion about whether providing 30- or 60-day
18 supplies of opioids for acute injuries and
19 postoperative recoveries is or is not within
20 the acceptable medical standard of care; is
21 that right?

22 A. My opinion in terms of offering
23 a precise recommendation about the amount or
24 length of a prescription, of course, relates
25 to the context of the clinical situation.

1 Currently, we have worked hard,
2 and I have been a leader in this area, to
3 introduce multimodal analgesic practices that
4 limit the prescription of opioids under these
5 conditions. And it was really the
6 recognition of these patients being exposed
7 to increasing doses of opiates and not doing
8 well that motivated me and others to work to
9 change that.

10 Q. Okay. Once the medical
11 standard of care for the treatment of chronic
12 and acute pain had changed, was that change
13 in the standard of care communicated to
14 medical practitioners?

15 MR. LOESER: Objection. Form.
16 Mischaracterizes his testimony.

17 THE WITNESS: I believe that,
18 as I mentioned before, that changing
19 in practice at the time was --
20 misrepresented that such practices
21 would achieve more efficacious
22 analgesic care for the patients and
23 also be safe. Subsequent we've found
24 that's not to be the case.

25 And so I don't believe that

1 your wording of an establishment of
2 change of -- or an acceptable change
3 in the practice of care is best
4 represented with the idea that
5 physicians in general accepted that
6 all patients could receive -- should
7 be receiving high doses and lengthy
8 doses of opioids.

9 Sorry.

10 QUESTIONS BY MR. MOONEY:

11 Q. Okay. So I understand that
12 it's your opinion that now, today, or at some
13 point in the more recent past, physicians
14 have determined that maybe opioids are not as
15 safe and effective for certain uses as they
16 once believed.

17 Is that fair? That's the gist
18 of what your --

19 A. Our current, yes.

20 Q. Has changed.

21 I'm sorry, I just interrupted
22 you. Your current. I didn't mean to
23 interrupt.

24 A. When I entered the pain
25 management services, again, around 1999,

1 2000, I was seeing an increased number of
2 patients that came in on these medications
3 who continued to have chronic, painful
4 complaints who were no better. And so I
5 believe at the time there was a recognition
6 by myself and others that nonopioid
7 strategies were important to help manage
8 these painful conditions.

9 So just as the time that there
10 was a pressure to change practices, that is,
11 as you characterize that the practice had
12 changed, there were also ongoing efforts to
13 recognize that and potentially reverse to a
14 safer strategy for pain management.

15 Q. Understood.

16 I want to be clear. You said
17 that I characterized it as a change.

18 Doesn't your report say the
19 medical standard of care for treating both
20 chronic and acute pain was changed on
21 page 27?

22 Isn't that your opinion?

23 A. And I would say the context of
24 that is -- well, if you don't mind, let me
25 just have a quick look at it again.

1 Page 27?

2 Q. Page 27.

3 A. Thank you.

4 Q. And I understand that you have
5 an opinion about why the standard of care
6 changed. My question is simply: It changed,
7 correct?

8 A. And I would add that it changed
9 due to the misdirection and misinformation
10 provided by the pharmaceutical industry
11 influence of studies and product information
12 and sales representation.

13 Q. But it did change; yes or no?

14 A. Again, it's a change relative
15 to -- in proportionate to the understanding
16 of -- that chronic opiate use in higher doses
17 was safe and effective.

18 Q. Your report describes marketing
19 claims and sales detailing that you opine
20 promoted misconceptions concerning opioids,
21 correct?

22 A. My report's opinion is that
23 there were numerous examples of opioid
24 product information that was incorrect and
25 not substantiated by the scientific

1 literature that's also been -- also supported
2 by subsequent reviews and systematic reviews
3 to that effect.

4 Q. Do you have any basis to opine
5 that any of the distributor defendants that
6 we talked about at the beginning of my
7 questioning of you were aware that any
8 marketing claims or sales detailing
9 concerning opioids contained misleading or
10 false information?

11 A. That was outside the scope of
12 my report, and I did not offer an opinion.

13 Q. So you don't have a basis to
14 opine on that?

15 MR. LOESER: Objection.

16 Mischaracterizes his testimony.

17 THE WITNESS: I do not have an
18 opinion on that based on my report.

19 MR. MOONEY: Okay. I have no
20 more questions, so if you don't mind,
21 we'll just go off the record real
22 quick so John and I can switch seats.

23 THE WITNESS: Sure. Sure.

24 VIDEOGRAPHER: Okay. We are
25 now going off record, and the time is

1 2:44 p.m.

2 (Off the record at 2:44 p.m.)

3 VIDEOGRAPHER: We are now going
4 back on the record, and the time is
5 2:45 p.m.

6 CROSS-EXAMINATION

7 QUESTIONS BY MR. LAVELLE:

8 Q. Good afternoon, Dr. Schumacher.
9 My name is John Lavelle. I'm an attorney at
10 Morgan Lewis, and I am representing Rite Aid
11 Pharmacy Company.

12 Are you aware that Rite Aid is
13 a defendant in this litigation that you are
14 an expert in?

15 A. I was -- I am now aware that
16 you're at the table, but as part of my
17 preparation of my report and opinion, I was
18 not aware that Rite Aid was connected in this
19 process.

20 Q. So as we're sitting here today,
21 we're here for your deposition on April 23,
22 2019, correct?

23 A. That's correct.

24 Q. You're aware today -- because I
25 introduced myself earlier during this

1 deposition and who I represent, you're now
2 aware --

3 A. Yes.

4 Q. -- that Rite Aid is a
5 defendant; is that right?

6 A. That's correct.

7 Q. Prior to today, prior to
8 April 23rd, you were not aware of that; is
9 that correct?

10 A. That's correct.

11 My only information had come
12 from, frankly, the media that distributors
13 were also being examined for liability in the
14 opioid epidemic.

15 Q. Well, focusing specifically on
16 your report --

17 A. Yes.

18 Q. -- which was authored March 25,
19 2019 --

20 A. That's correct.

21 Q. -- when you completed your
22 report, were you aware at that time that Rite
23 Aid was a defendant in this litigation?

24 A. I had no opinion about Rite
25 Aid's role in my report, and I gave no

1 opinion.

2 Q. Okay. You're jumping ahead to
3 the next question I may ask.

4 A. Okay.

5 Q. I want to ask you about the
6 question I asked --

7 A. Okay.

8 Q. -- which was: Were you aware,
9 when you prepared and completed this report
10 on March 25, 2019, that Rite Aid was a
11 defendant in the litigation?

12 A. No, I was not.

13 Q. I'm going to ask you about some
14 of the other retail chain pharmacies.

15 Were you aware, when you
16 completed your report on March 25, 2019, that
17 CVS was also a defendant in this litigation?

18 A. No, I was not.

19 Q. Were you aware, when you
20 prepared your report on March 25, 2019, that
21 Walgreen Company was a defendant in this
22 litigation?

23 A. No, I was not.

24 Q. When you completed your report
25 on March 25, 2019, were you aware that

1 Walmart was a defendant in this litigation?

2 A. I was not aware.

3 Q. Were you aware on March 25,
4 2019, when you completed your report that
5 Giant Eagle stores was a defendant in this
6 litigation?

7 A. I was not aware.

8 MR. LOESER: Were you aware
9 that there was such a thing as Giant
10 Eagle stores?

11 QUESTIONS BY MR. LAVELLE:

12 Q. Yes. Well, counsel asked a
13 good question; I'm going to ask the same one.

14 You never heard of Giant Eagle
15 stores?

16 A. That was the top of my mind,
17 actually. I'd never heard of that before.
18 Fair enough, yeah.

19 Q. All right. Fair enough.

20 A. Yeah.

21 Q. So you looked earlier in the
22 deposition at your report, which you have in
23 front of you, right?

24 A. Yes, I do.

25 Q. And you've got on page 6 a

1 footnote, footnote 1, that refers to
2 defendants and defines defendants; is that
3 right?

4 A. That is correct.

5 Q. And your definition of
6 defendants excludes all of the pharmacies
7 that we just mentioned; is that right?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: Those pharmacies
10 do not appear as this footnote.

11 QUESTIONS BY MR. LAVELLE:

12 Q. So throughout your report, when
13 you referred to defendants, you are not
14 referring to any of the chain pharmacies; is
15 that right?

16 A. Within the report I have used
17 wording that is broad and refers to the
18 pharmaceutical industry. In that regards,
19 that's the breadth of that.

20 However, the defendants as
21 listed do not include the companies you just
22 mentioned.

23 Q. So just to be clear, Doctor,
24 when you refer in your March 25, 2019 expert
25 report to defendants --

1 A. Uh-huh.

2 Q. -- you are not referring to any
3 of the retail chain pharmacies; is that
4 right?

5 A. The retail chain pharmacies
6 were outside the scope of preparation of my
7 report.

8 Q. So the answer to my question
9 is, yes, you are not referring to them; is
10 that right?

11 A. I have not referred to those
12 companies in my report. They're outside the
13 scope of my report preparation.

14 Q. Are you aware of the basis on
15 which plaintiffs have asserted claims against
16 any of the retail chain pharmacies?

17 A. Only relative to my own reading
18 in the media. But I have not discussed
19 such -- well, I can't reveal discussions with
20 counsel, but, again -- I'm sorry, could you
21 repeat your question?

22 Q. Sure.

23 And I understand you may be
24 getting confused here. I'm not asking for
25 communications you had with your counsel.

1 I'm just asking what your understanding is.

2 As you sit here today on
3 April 23, 2019, do you have an understanding
4 of why plaintiffs have asserted claims or
5 what the claims are that the plaintiffs have
6 asserted against the retail chain pharmacies?

7 A. That's outside the scope of my
8 report. I have no opinion in that matter.

9 Q. But do you have an
10 understanding of what the claims are against
11 them?

12 A. No, I do not.

13 Q. Do you have an understanding
14 today as to whether they have been sued for
15 dispensing as opposed to distribution?

16 A. I don't know.

17 Q. Do you know whether any of the
18 pharmacies I've mentioned earlier, Rite Aid,
19 CVS, Walmart, Walgreens, Giant Eagle, whether
20 they, in fact, distribute opioids or have
21 distributed opioids?

22 A. Within the -- preparing for
23 this report, I have no evidence other than
24 just from personal knowledge of being a
25 physician and knowing that certain pharmacies

1 dispense opioids to patients.

2 Q. And what is that understanding?

3 A. That -- for example, I'm aware
4 that CVS Pharmacy dispenses opioids.

5 Q. Do you know whether they
6 distribute opioids?

7 A. I do not know.

8 Q. Any of the other retail chain
9 pharmacies, do you have an understanding of
10 whether they distribute opioids?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: I do not know.

13 QUESTIONS BY MR. LAVELLE:

14 Q. Do you have an understanding as
15 we sit here today on April 23, 2019, as to
16 whether any of those retail chain pharmacies
17 conducted any marketing activities with
18 respect to opioids?

19 A. I do not know.

20 Q. Would you agree with me that
21 the documents --

22 MR. LAVELLE: I'm sorry to say
23 that we've -- this is John Lavelle,
24 representing Rite Aid. We've been
25 speaking for quite a while here with

1 apparently the mute on, so I'll
2 apologize, although I'm not sure when
3 the phone was muted.

4 VIDEOGRAPHER: It's eight
5 minutes.

6 MR. LOESER: I could give a
7 very quick summary, if you'd like.

8 QUESTIONS BY MR. LAVELLE:

9 Q. Okay. So let me just look at
10 the realtime here to see where we were.

11 Doctor, would you agree with me
12 that documents that you have identified in
13 Appendix 2 to your report, which are the
14 documents that you reviewed in order to
15 prepare your opinions, do not include any
16 marketing materials from any of the retail
17 chain pharmacies, that is, no marketing
18 materials from Rite Aid, CVS, Walmart,
19 Walgreens or Giant Eagle?

20 A. Upon my review, I see -- I do
21 not identify any of those materials in this
22 exhibit, which is Exhibit 3, apparently.

23 Q. Did you request any materials
24 or information relating to the retail chain
25 pharmacies that you did not have an

1 opportunity to review prior to finalizing
2 your report?

3 MR. LOESER: I'm going to
4 object and instruct the witness not to
5 answer any question about
6 communications and conversations with
7 counsel.

8 So instruct you not to answer
9 that question.

10 QUESTIONS BY MR. LAVELLE:

11 Q. Do you have any plans in the
12 future to offer opinions concerning any of
13 the retail chain pharmacies?

14 A. As I understand the process, my
15 expert opinion and report as submitted on the
16 25th of March allows me to further develop my
17 opinion based on additional information in
18 the process.

19 I'll tell you honestly, I don't
20 know if that extends through the whole
21 process or was just the process until we're
22 here at the deposition.

23 Q. So do you have any plans in the
24 future to offer opinions concerning any of
25 the retail chain pharmacies?

1 A. Thus far, my testimony is based
2 on the report given and the list of the
3 defendants that we've reviewed that are
4 listed in footnote 1.

5 Q. Doctor, I understand your
6 testimony earlier, and I think you've been
7 clear that you have not offered any opinions
8 concerning any of the retail chain
9 pharmacies, and I appreciate your explaining
10 that to us.

11 My question is a different one.
12 My question is: Do you have any plans in the
13 future to offer opinions concerning any of
14 the retail chain pharmacies, that is,
15 opinions that you have not yet committed to
16 writing?

17 MR. LOESER: And, Counsel, I
18 think part of the confusion is if
19 you're talking about the Summit and
20 Cuyahoga bellwether cases or
21 subsequent cases, so maybe if you can
22 clarify that, that can be helpful.

23 THE WITNESS: I'm struggling
24 with the process here to answer your
25 question as clearly as I can.

1 I don't have an answer for that
2 given the information I have
3 currently.

4 QUESTIONS BY MR. LAVELLE:

5 Q. You haven't been given any
6 information about the retail chain
7 pharmacies, correct?

8 A. That's correct.

9 Q. So you would have no basis on
10 which to offer opinions at this stage, right?

11 A. I have no basis to offer an
12 opinion today.

13 MR. LAVELLE: That's all I
14 have. Thank you, Doctor.

15 THE WITNESS: Thank you.

16 VIDEOGRAPHER: We are now going
17 off the record, and the time is
18 2:57 p.m.

19 (Off the record at 2:57 p.m.)

20 VIDEOGRAPHER: We are now going
21 back on the record, and the time is
22 3 p.m.

23 CROSS-EXAMINATION

24 QUESTIONS BY MR. EHSAN:

25 Q. Good afternoon, Dr. Schumacher.

1 A. Good afternoon.

2 Q. My name is Houman Ehsan, and I
3 represent Janssen in this litigation.

4 Doctor, do you know what opioid
5 medications, if any, Janssen manufactures or
6 manufactured in the past?

7 A. I'm most familiar with the
8 Duragesic product, the transdermal.

9 Q. Do you know when the Duragesic
10 transdermal system was first approved for
11 market in the United States?

12 A. I do not.

13 Q. If I told you it was 1990,
14 would you have any reason to disbelieve me?

15 A. No.

16 Q. Did you prescribe at any point,
17 whether in your training or as an attending
18 physician, a Duragesic transdermal patch for
19 any of your patients?

20 A. Yes. This would be -- sorry,
21 in -- principally in the hospital setting,
22 yeah.

23 Q. Have you had any occasion to
24 prescribe the Duragesic transdermal patch
25 system for a patient in an outpatient

1 setting?

2 A. No, I have not.

3 Q. Do you have a sense of how
4 often in a particular year you would
5 prescribe a Duragesic transdermal patch for
6 inpatients that were under your care?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: So the structure
9 of our medication management for
10 inpatients essentially requires a
11 review and confirmation of the
12 medications they're on, and
13 essentially physicians, the primary
14 admitting physicians, would rewrite
15 that order.

16 If for some reason that was
17 missed, at least in their process, and
18 we were consulted, we would initially
19 rewrite that order, or the resident
20 would rewrite it, until we understood
21 the overall medical history and
22 history of analgesic use for that
23 patient.

24 QUESTIONS BY MR. EHSAN:

25 Q. If I understand your testimony,

1 Doctor, correctly, that as a consult
2 physician in the hospital, you just make
3 recommendations to the primary care team, and
4 unless something is missed, you or your team
5 wouldn't be the ones writing prescriptions
6 for patients in an inpatient setting; is that
7 correct?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: That is not
10 correct. There are a number of --
11 sorry, a number of situations where
12 the pain management services would be
13 primary prescribers. It depends on
14 the context of the admission and the
15 difficulty to manage a particular
16 patient.

17 If there's a pain crisis
18 evolving or if there's other
19 interventions required to manage that
20 patient's pain, we work -- that there
21 would only be a single, essentially,
22 prescriber so there -- avoid confusion
23 of conflicting orders.

24 QUESTIONS BY MR. EHSAN:

25 Q. How many patients in a given

1 month are you the primary treating physician
2 for in a hospital?

3 MR. LOESER: Objection. Form.

4 THE WITNESS: So I -- pardon
5 me -- attend two days a week, and our
6 census usually is about 20 patients a
7 day I see. And so on average I'll
8 see -- half of those patients, at
9 least, are chronic pain patients or
10 acute on chronic.

11 I may have lost track of your
12 question. Sorry about that.

13 QUESTIONS BY MR. EHSAN:

14 Q. What percentage of those
15 patients are you the primary responsible
16 physician for?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: I'm not sure I
19 understand the question.

20 Do you mean the admitting
21 physician or the consult pain
22 physician?

23 QUESTIONS BY MR. EHSAN:

24 Q. My question is straightforward.
25 You said that you, on occasion,

1 would write prescriptions for opioids in an
2 inpatient setting.

3 My question is: What
4 percentage of the patients you see in a
5 hospital are you or your team the primary
6 managing physician for?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: If I understand
9 your question, that when we are
10 consulted by the primary service, we
11 are either writing the opioid or
12 analgesic orders or we're providing
13 recommendations.

14 The interpretation of what a
15 primary physician is -- I'm a little
16 bit confused of what you mean by that.

17 QUESTIONS BY MR. EHSAN:

18 Q. Let me ask you this way: What
19 percentage are you making -- for what
20 percentage of patients are you making a
21 recommendation for an opioid versus for what
22 percentage of patients are you actually
23 writing the opioid prescription for?

24 MR. LOESER: Objection. Form.

25 Assumes facts not in evidence.

1 THE WITNESS: I would say that
2 on average we're actually writing for
3 probably at least 60 percent of these
4 patients. Something in that range.
5 It varies.

6 QUESTIONS BY MR. EHSAN:

7 Q. Dr. Schumacher, you said that
8 the standard of care related to opioid
9 prescribing changed in 1996.

10 Do you recall that testimony?

11 MR. LOESER: Objection.

12 Mischaracterizes his testimony.

13 THE WITNESS: That was the
14 words that one of the attorneys, I
15 believe, used.

16 My wording is that due to
17 intense marketing by pharmaceutical
18 industry, there was an increase in
19 prescribing of opioids by physicians
20 that had the understanding that doing
21 so was safe and effective for their
22 patients.

23 QUESTIONS BY MR. EHSAN:

24 Q. So in your report, you don't
25 mention that the standard of care was changed

1 by the pharmaceutical industry?

2 A. No, I remember we reviewed
3 that.

4 Q. And what -- when did that
5 happen?

6 MR. LOESER: Objection. Form.

7 THE WITNESS: Again, I -- my
8 opinion is that beginning in 1996 or
9 thereabouts, due to the forces of the
10 pharmaceutical industry to promote
11 opioids, that many physicians'
12 practices changed in ways to utilize
13 chronic opioids in high dose and
14 potency opioids for their chronic
15 noncancer patients.

16 QUESTIONS BY MR. EHSAN:

17 Q. Dr. Schumacher, were you ever
18 visited by a pharmaceutical representative
19 that detailed you on the Duragesic patch?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: I can't recall.

22 QUESTIONS BY MR. EHSAN:

23 Q. Do you believe you may have
24 been visited by a pharmaceutical rep to
25 discuss the Duragesic patch?

1 A. I can't recall.

2 Q. You said you were -- in the
3 past have interacted with pharmaceutical
4 representatives related to other analgesic
5 medications, correct, Doctor?

6 A. I did say that, that's correct.

7 Q. Were there instances -- sitting
8 here today, do you recall any instance in
9 which a pharmaceutical rep told you a
10 misleading or false information related to
11 the medications that they were discussing
12 with you?

13 MR. LOESER: Objection. Form.

14 THE WITNESS: I don't recall.

15 QUESTIONS BY MR. EHSAN:

16 Q. Would it be fair to say that
17 it's possible for a pharmaceutical
18 representative to visit a doctor, discuss a
19 medication and not make any false or
20 misleading statements to that doctor?

21 MR. LOESER: Objection. Form,
22 and calls for speculation.

23 THE WITNESS: Although that is
24 a possible outcome, based on my review
25 of the evidence and exhibits provided,

1 I was astonished by the number of
2 misstatements and misleading
3 statements that were offered around
4 the use of chronic opioids for chronic
5 noncancer pain.

6 QUESTIONS BY MR. EHSAN:

7 Q. How many call notes did you
8 review in preparation for your expert report?

9 A. I surveyed hundreds of them.

10 Q. Do you know how many
11 physician/pharmaceutical rep interactions
12 there were in the Cuyahoga County and Summit
13 Counties between 1996 and 2015?

14 A. I do not.

15 Q. Would you suspect that it would
16 be a lot more than hundreds?

17 MR. LOESER: Objection. Calls
18 for speculation.

19 THE WITNESS: I do not know.

20 QUESTIONS BY MR. EHSAN:

21 Q. How did you -- did you select
22 the hundreds of particular call notes you
23 reviewed, or were they provided to you?

24 A. I was provided by counsel with
25 what is listed as exhibits in Appendix 2, and

1 I reviewed -- sampled as many as I could and
2 selected certain of them as examples.

3 Q. Did you consider it a context
4 in which the pharmaceutical reps -- well, let
5 me back up a second.

6 You understand that the call
7 notes are a summary of an interaction between
8 a -- well, let me back up and ask the
9 question.

10 What is your understanding of
11 what the call notes represent?

12 A. As I understand them, my
13 interpretation is that they're a report back
14 to the corporation and to their leadership or
15 supervisors monitoring their ability to
16 market a particular opioid product.

17 Q. Are they all written in full
18 sentences?

19 A. It appears there is a mixture
20 of abbreviations and full sentences, is what
21 I have reviewed.

22 Q. Did you review the regulations,
23 if any, related to what a sales
24 representative or a pharmaceutical
25 representative needs to include or not

1 include in his or her call notes?

2 A. I don't recall.

3 Q. Did you review any standard
4 operating procedures from any of the
5 defendants related to how and the manner in
6 which a -- pharmaceutical representatives
7 would keep track of their interactions with
8 physicians via call notes?

9 MR. LOESER: Objection to form.

10 THE WITNESS: Just give me a
11 moment. I'd like to just review a
12 portion of my exhibits.

13 QUESTIONS BY MR. EHSAN:

14 Q. Sure.

15 A. I can't recall the details of
16 specific instructions to sales
17 representatives on a protocol for their call
18 notes.

19 Q. Is it your opinion, Doctor,
20 that you had adequately understood the
21 context of those call notes before you made a
22 decision whether or not they were evidence of
23 a misrepresentation by the pharmaceutical
24 representative to the physician?

25 MR. LOESER: Objection. Form.

1 Calls for a legal conclusion.

2 THE WITNESS: With my review of
3 these sales representative notes, it
4 struck me hard, frankly, that there
5 was such misrepresentation of the use
6 of high-dose opioids under various
7 clinical situations.

8 Again, in Exhibit B -- and I'll
9 quote: "Doctor has a ton of Vicodin
10 patients. A lot of low back pain.
11 Leery of Class II. Use product
12 information to sell low-abuse,
13 Q12-hour."

14 And "Doctor agreed to use for
15 all of his low back instead of
16 Vicodin. Keep on this guy. He's easy
17 money."

18 My interpretation is I don't
19 particularly believe I need additional
20 direction to interpret that as -- that
21 the promotion of these opioids were
22 not based on a description of the
23 scientific evidence to that particular
24 physician and provided a variety of
25 misstatements and misdirection for

1 that physician that might influence
2 their prescribing practices.

3 QUESTIONS BY MR. EHSAN:

4 Q. So sitting here looking at that
5 language you read, you feel comfortable
6 opining on whether the pharmaceutical
7 representative intended to deceive the doctor
8 and whether or not that doctor was, in fact,
9 deceived by that and whether the doctor
10 actually wrote prescriptions that were
11 inappropriate for his patients or her
12 patients?

13 MR. LOESER: Objection. Form.
14 Mischaracterizes his prior testimony.

15 THE WITNESS: This particular
16 example -- there were multiple other
17 examples that I came across that
18 appeared to misrepresent the intent of
19 providing physicians with details
20 about -- to safely manage their
21 patient without harm.

22 QUESTIONS BY MR. EHSAN:

23 Q. So you were able to understand
24 the intent of the pharmaceutical
25 representatives based on the call notes you

1 have in front of you; is that correct?

2 MR. LOESER: Objection to --

3 THE WITNESS: My --

4 MR. LOESER: -- form, and it
5 mischaracterizes his prior testimony.

6 THE WITNESS: Yeah, my opinion
7 does not focus on the --
8 characterizing an individual's, sales
9 rep's, intent, short of misdirecting a
10 physician, because they're using
11 information that's not supported by
12 the scientific evidence.

13 QUESTIONS BY MR. EHSAN:

14 Q. Likewise, Doctor, are you aware
15 of whether or not any of those doctors that
16 are the subject of those call notes --

17 A. Uh-huh.

18 Q. -- made a improper -- wrote an
19 improper prescription for any opioids as a
20 result of the interaction with the
21 pharmaceutical reps?

22 MR. LOESER: Objection. Form,
23 and outside the scope of his opinions.

24 THE WITNESS: I do not know.

25

1 QUESTIONS BY MR. EHSAN:

2 Q. Dr. Schumacher, are you aware
3 of any physician in the state of Ohio who
4 wrote an improper prescription for opioids as
5 a result of false or misleading statements
6 made to him or her by a pharmaceutical
7 representative?

8 MR. LOESER: Objection. Form.
9 Outside the scope of the report.
10 Asked and answered in prior
11 questioning.

12 THE WITNESS: I do not have
13 direct references that link these
14 reports to an individual physician
15 writing a prescription.

16 However, what I do know, based
17 on the research in this report, is
18 that as there was aggressive marketing
19 to physicians to prescribe high-dose
20 opioids, as illustrated in these
21 examples, there was an increase across
22 the country of prescribing opioids and
23 stronger doses of opioids that
24 paralleled an increase in harm to the
25 population.

1 QUESTIONS BY MR. EHSAN:

2 Q. So that would be a temporal
3 association or temporal correlation?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: Could you explain
6 your question, please?

7 QUESTIONS BY MR. EHSAN:

8 Q. Let me back up and ask a
9 slightly different question.

10 Doctor, how many of those call
11 notes you have in front of you are from
12 Summit or Cuyahoga County?

13 MR. LOESER: Objection. Form.

14 THE WITNESS: I do not know.

15 The extent of the description for
16 several of these indicates they're
17 from Ohio. That's the level of detail
18 that's provided.

19 QUESTIONS BY MR. EHSAN,

20 Q. Did you make any efforts to try
21 to limit your analysis to call notes that
22 were -- that reflected interactions with
23 doctors or prescribers in Summit and Cuyahoga
24 County?

25 A. If I understood your question,

1 I made no effort to restrict to those
2 counties.

3 Q. Doctor, to the extent that you
4 had interactions with pharmaceutical
5 representatives for any purpose in your
6 career, have you had occasion to be left the
7 package insert or prescribing information for
8 the medication that was the subject of the
9 discussion?

10 A. That has occurred in the past,
11 yes.

12 (Schumacher Exhibit 7 marked
13 for identification.)

14 QUESTIONS BY MR. EHSAN:

15 Q. And I'm going to mark as the
16 next exhibit...

17 Doctor, I've handed you what's
18 been -- or you've been handed what's been
19 marked as Exhibit 7. I'll represent to you
20 this is the package insert for the Duragesic
21 transdermal system for 2005.

22 If you would like to confirm,
23 if you can go to the last page, you'll see
24 it's electronically signed by Bob Rappaport,
25 who I'll represent to you is from the FDA, on

1 February 4th of 2005.

2 Doctor, have you ever seen the
3 package insert for Duragesic?

4 MR. LOESER: And I'll caution
5 the witness to review the document
6 before indicating whether he's seen it
7 or not previously.

8 MR. EHSAN: I'm not talking
9 about this particular document.

10 QUESTIONS BY MR. EHSAN:

11 Q. I'm talking about have you ever
12 seen a package insert for Duragesic at any
13 point in time?

14 A. Yes, I have.

15 Q. Were you aware that it
16 contained a box warning?

17 A. The black box warning, that's
18 correct.

19 Q. And do you see the first page,
20 and actually continuing on to the second page
21 of this document, contained some bolded
22 language that is surrounded by a box,
23 correct?

24 A. That's correct.

25 Q. And that is what is

1 colloquially referred to as the box warning,
2 correct?

3 A. That's correct.

4 Q. And do you have an
5 understanding of whether or not the box
6 warning is the highest level of warning a
7 prescription medication can carry within the
8 United States?

9 A. That's my understanding.

10 MR. ERCOLE: Counsel, before
11 you ask more questions about this
12 document, can you just clarify that --
13 I believe you're asking questions
14 generally about this package insert,
15 or are you asking if he's seen this
16 one and is knowledgeable about this
17 package insert?

18 MR. EHSAN: I asked him if he's
19 ever seen any package insert for
20 Duragesic, and then the questions
21 about a boxed warning is just generic
22 about boxed warnings.

23 QUESTIONS BY MR. EHSAN:

24 Q. Focusing your attention on this
25 document, which has been marked as Exhibit 7,

1 Doctor, would you mind reading aloud the
2 first paragraph that's in the box?

3 A. "Duragesic contains a high
4 concentration of a potent Schedule II opioid
5 agonist fentanyl. Schedule II opioid
6 substance which include fentanyl,
7 hydromorphone, methadone, morphine, oxycodone
8 and oxymorphone have the highest potential
9 for abuse and associated risk of fatal
10 overdose due to respiratory depression.
11 Fentanyl can be abused and is subject to
12 criminal diversion. The high content of
13 fentanyl in the patches, Duragesic, may be a
14 particular target for abuse and diversion."

15 Q. You can stop there. Thank you,
16 Doctor.

17 Anything you would consider
18 false or misleading about the paragraph you
19 just read?

20 A. No.

21 Q. Is it true that this paragraph,
22 even though it's from 2005, still even today
23 adequately reflects the risk associated with
24 Schedule II opioids in terms of addiction,
25 diversion or respiratory depression?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: It represents a
3 part of the description. I would
4 agree with that.

5 QUESTIONS BY MR. EHSAN:

6 Q. And if you go to the next
7 section, it states that: "Duragesic is
8 indicated for the management of persistent,
9 underlined, moderate to severe chronic pain,
10 that, colon, requires continuous
11 around-the-clock opioid administration for an
12 extended period of time, comma," and, next
13 bullet, "cannot be managed by other means
14 such as nonsteroidal analgesics, opioid
15 combination products or immediate-release
16 opioids."

17 Did I read that correctly,
18 Doctor?

19 A. You did read that correctly.

20 Q. Would it be fair to say then,
21 Doctor, that the Duragesic patch is not a
22 first-line opioid medication?

23 MR. LOESER: Objection. Form.

24 THE WITNESS: As reflected in
25 this 2005 document.

1 However, I do recall that prior
2 releases of Duragesic did not have all
3 of the same wording here.

4 QUESTIONS BY MR. EHSAN:

5 Q. At least as of the 2005
6 label -- and I will represent to you that
7 this language continues going forward -- that
8 this medication was intended for patients who
9 were already receiving opioids, correct?

10 A. That is correct.

11 Given the difficulties of
12 having introduced this system previously to
13 nonopioid patients, there were a number of
14 incidents of disastrous respiratory failure
15 and death associated with the use of this
16 system in so-called nonopioid-tolerant
17 patients.

18 Q. And not only does this
19 medication require a patient to be
20 opioid-tolerant, but it also required that
21 patients couldn't have been managed by other
22 means such as nonsteroidal analgesic opioid
23 combination products and immediate-release
24 opioids.

25 Do you see that?

1 MR. LOESER: Objection. Form.

2 QUESTIONS BY MR. EHSAN:

3 Q. That's the second bullet point.

4 A. I'm aware that what you've read
5 is included in this description.

6 Q. In evaluating a patient --

7 MR. LOESER: Counsel, I think
8 he was --

9 MR. EHSAN: I'm sorry, were
10 you --

11 THE WITNESS: No, that's fine.
12 I'll stop.

13 QUESTIONS BY MR. EHSAN:

14 Q. You sure?

15 I apologize if I interrupt.

16 A. No problem.

17 Q. Would it be fair to say,
18 Doctor, that whether or not a patient had
19 failed other nonopioid therapeutic or
20 analgesic interventions would be relevant in
21 making a medical decision on whether or not
22 to prescribe that patient an opioid?

23 MR. LOESER: Objection. Form.

24 THE WITNESS: So their decision
25 to prescribe a long-acting or

1 around-the-clock opioid for noncancer
2 chronic pain really depends on the
3 context for that particular patient,
4 as I mentioned before.

5 And given that there's
6 essentially no strong evidence that
7 chronic opioid therapy for noncancer
8 chronic pain has not been shown to be
9 effective and can be associated with
10 great harm, I would want to put this
11 sentence, this point, into the context
12 of that decision and may very well
13 fall into these very low -- very low
14 percentage of patients that might
15 actually represent a candidate for
16 such therapy.

17 QUESTIONS BY MR. EHSAN:

18 Q. Doctor, has there been strong
19 evidence to show efficacy of opioids for
20 cancer pain treatment?

21 A. There has been, yes.

22 Q. Is your opinion that -- let me
23 back up and ask one other question.

24 Has there been evidence in your
25 mind that is strong on the efficacy of

1 opioids in long-term treatment of cancer
2 pain?

3 A. There is also good evidence,
4 strong evidence, for that.

5 Q. But you believe that there is
6 not good evidence or strong evidence for the
7 treatment of chronic noncancer pain with
8 opioids; is that correct?

9 A. That is my opinion, yes.

10 Q. Can you tell me which
11 nociceptor in the body -- well, let me back
12 up.

13 Do you know what a nociceptor
14 is, Doctor?

15 A. Yes. A nociceptor has been
16 described to be a -- sensory neurons our
17 primary afferent nociceptor was principally
18 discussed that is either an unmyelinated or
19 slightly myelinated primary afferent
20 nociceptor neuron. So it detects
21 both noxious chemical, mechanical and thermal
22 stimuli signals, impending or actual tissue
23 damage to the central nervous system.

24 Q. Do you know of any
25 cancer-specific nociceptor in the body,

1 Doctor?

2 A. A nociceptor is only activated
3 in the -- under the condition of cancer.

4 Q. That's correct.

5 A. I'm not aware that the
6 mechanism works that way.

7 Q. Are you aware of anyone being
8 able to assess -- let me back that up. Let
9 me back up and ask this question slightly
10 different.

11 These primary afferent neurons
12 have targets in the thalamus, correct?

13 A. That is one -- after they
14 connect through the spinal cord, there's
15 ascending pathways that pass through the
16 thalamus and other structures, that's
17 correct.

18 Q. I will get to the other
19 structures.

20 A. Oh.

21 Q. Anywhere -- is there a
22 cancer-specific portion of the thalamus where
23 cancer pain registers where other cancer
24 pains don't?

25 A. I'm not aware of, no.

1 Q. How about the rostral ventral
2 medulla?

3 A. Not as a specific center for
4 cancer pain.

5 Q. How about the periaqueductal
6 gray matter?

7 A. No.

8 Q. So, Doctor, can you tell me
9 what, from a neurobiology or neuroanatomy, is
10 there any unique aspect of cancer pain that
11 maps differently than noncancer pain in the
12 human brain?

13 A. So the distinguishing features
14 of cancer pain may reflect not just tissue
15 trauma but a particular cancer may be
16 releasing factors that produce plasticity
17 changes in the nervous system that are
18 potentially different than, say, a traumatic
19 injury or postsurgical pain or osteoarthritis
20 pain or back pain.

21 And so there is evidence that
22 certain types of cancer pain, again, release
23 factors that are unique, that are not in all
24 other pain syndromes.

25 Q. And that's true for all cancers

1 or just some cancers?

2 A. I don't believe all cancers
3 have been studied relative to their
4 potential, but I'm familiar with certain
5 cancers that involve -- for instance,
6 squamous cell carcinomas have been studied in
7 some detail. Or the effect of, for instance,
8 pancreatic cancer, and because of its
9 location, the degree of inflammation that can
10 be generated from a cancer there is unique
11 compared to other sites of cancers, for
12 instance, lung cancer.

13 Q. Is it your understanding that
14 the strong evidence on the efficacy of
15 opioids for cancer pain is restricted to
16 cancers that release certain factors, or is
17 it more general to all cancers?

18 A. I believe as we practice,
19 it's -- despite those potential differences,
20 it has been broadly applied to the treatment
21 of cancer pain.

22 Q. Generally; is that correct?

23 A. Generally, that's right, yeah.

24 Q. So sitting here today, can
25 you -- do you have an opinion about what it

1 is about cancer pain that allows opioids to
2 be effective long-term that doesn't exist in
3 chronic noncancer pain?

4 A. I believe the literature that
5 supports the use of opioids in -- high
6 potency opioids in cancer pain has grown --
7 has developed over time relative to, frankly,
8 the survivorship of cancer patients. And the
9 idea is that the compassionate use of opioids
10 in the setting of advancing active cancer as
11 well as end-of-life care is in balance with
12 the potential risks.

13 However, not all cancer pain is
14 necessarily responsive to opioids alone. And
15 as a pain physician, when presented with
16 these patients, we look at all potential
17 modalities to help manage such patients,
18 especially given that as survivorship has
19 improved with these patients, we're now
20 realizing that the chronic opioid therapy
21 that they were receiving, in fact, is
22 impairing their quality of life after
23 survivorship with the same risk and harms
24 that we've seen in chronic noncancer pain
25 patients using these opioids chronically.

1 Q. Doctor, my question was
2 actually very specific --

3 A. Oh, I'm sorry.

4 Q. -- about the efficacy, not the
5 risk profile. So I want to back up a second.

6 A. Sure. Sure.

7 Q. If the opioids didn't relieve
8 long-term pain in cancer, irrespective of
9 whether or not the risk mattered to the
10 patient given his or her life expectancy, you
11 still wouldn't prescribe an opioid, correct?

12 MR. LOESER: Objection. Form.
13 Mischaracterizes his testimony.

14 THE WITNESS: Yeah. So from my
15 perspective and my opinion is the
16 difficulty here is what constitutes
17 long-term efficacy. And many of the
18 studies that have been done both on
19 the chronic noncancer pain as well as,
20 to a degree, the cancer pain
21 literature have relied on relatively
22 short-term initial studies where we're
23 facing patients, both chronic
24 noncancer as well as cancer patients,
25 that are on these medications for

1 years. And we don't have, actually,
2 evidence that they continue to provide
3 the analgesic effects that initially
4 were intended.

5 I don't know if that helps
6 answer that.

7 QUESTIONS BY MR. EHSAN:

8 Q. If you look at Exhibit 7, which
9 is the Duragesic label that's in front of
10 you, Doctor --

11 A. Yes.

12 Q. -- there is no -- under the
13 second paragraph there -- an indicated --

14 A. Sorry, first page, still?

15 Q. First page.

16 A. Okay.

17 Q. Second full paragraph.

18 A. Uh-huh.

19 Q. It talks about Duragesic is
20 indicated for the management of persistent,
21 moderate to severe chronic pain.

22 Do you recall reading that
23 prior?

24 A. Yes, I do.

25 Q. There's no limitations there to

1 cancer; is that correct?

2 A. That's correct.

3 Q. Do you have an opinion whether
4 that's an inappropriate indication for
5 Duragesic, that it not be limited just to
6 cancer pain patients?

7 MR. LOESER: Objection. Form.
8 Also, it's outside the scope of his
9 opinion in this case.

10 THE WITNESS: Again, my opinion
11 is that there's very few indications
12 for the use of around-the-clock
13 chronic opioid therapy in chronic
14 noncancer pain.

15 And -- as there is no evidence
16 for its utility versus its risks of
17 harm.

18 QUESTIONS BY MR. EHSAN:

19 Q. Doctor, are you familiar with
20 the drug tapentadol?

21 A. I am familiar with it. It's --
22 yes, I am familiar with it.

23 Q. Do you know what the brand name
24 for tapentadol is?

25 A. I believe it's Nucynta.

1 Q. Have you had any occasion to
2 prescribe Nucynta to any of your patients?

3 A. On the inpatient services,
4 Nucynta is not on our formulary, and so a
5 patient who comes in with that medication,
6 honestly, it's a bit of a challenge to
7 continue them on that medication for that
8 reason.

9 Q. Have you found in your clinical
10 practice that whether or not a specific
11 medication is on a formulary can impact
12 whether or not you can prescribe it to a
13 patient?

14 A. Well, within the University of
15 California-San Francisco, whether or not a
16 medication is on a formulary absolutely
17 impacts its use in the hospital.

18 Q. Have you ever had occasion to
19 have any interaction with a pharmaceutical
20 representative related to Nucynta?

21 A. I don't believe so.

22 Q. Do you have an understanding of
23 Nucynta's mechanism of action?

24 A. I do have some understanding of
25 its mechanism.

1 Q. You understand that Nucynta has
2 nonopioid receptor function?

3 A. My understanding is that it
4 carries both serotonin and norepinephrine
5 reuptake inhibition, but it also is combined
6 with a stronger opioid effect, which --

7 Q. Do you have an understanding
8 one way or another about the abuse profile of
9 Nucynta versus other opioids?

10 A. I do not know.

11 Q. You understand, Doctor, that
12 both the Duragesic transdermal system and
13 Nucynta ER are long-acting opioids?

14 A. Yes. I mean, the transdermal
15 system is a continuous release formulation,
16 that's right.

17 Q. And just for clarity sake,
18 methadone is an actually long-acting opioid
19 by virtue of its half-life, correct?

20 A. That's correct.

21 Q. But putting methadone aside,
22 you can generate a long-acting medication
23 with a short half-life compound by virtue of
24 its delivery mechanism, correct?

25 A. I believe that the -- well,

1 again, you brought up the point about
2 methadone. Aside -- you know, each of these
3 opioids have unique properties of binding and
4 their half-lives once they bind.

5 So that is a factor relative to
6 how they are delivered over time in these
7 systems.

8 Q. I just want to be clear that
9 fentanyl itself is not a long-acting opioid.
10 But given the fact that the transdermal
11 system delivers small quantities over a
12 period of three days, it acts as if it was a
13 long-acting delivery system, right?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: Fentanyl patch,
16 as I understand it, provides a depot
17 of the fentanyl into the underlying
18 skin and fat and tissues, and from
19 there it is slowly -- enters the
20 system that way.

21 QUESTIONS BY MR. EHSAN:

22 Q. So it's not a function of the
23 medication's chemical half-life but rather
24 the delivery system that allows it to be a
25 long-acting agent, correct?

1 A. And also its property of
2 lipophilicity, its -- how it interacts with
3 membranes and -- that can be also a factor
4 independent of -- sorry, independent of its
5 binding to a receptor.

6 Q. Likewise, there are certain
7 long-acting versions of other opioids that
8 are -- that are in pill form that have a
9 slow-release mechanism within the GI tract,
10 correct?

11 A. That's what is proposed, that's
12 correct.

13 Q. Do you have an opinion one way
14 or another about whether or not this slow
15 delivery or extended-release delivery has any
16 advantages for the treatment of chronic pain?

17 A. My opinion is that the
18 continuous administration of opioids for
19 conditions most commonly like back pain and
20 centralized pain syndromes and headaches,
21 which make up the vast majority of chronic
22 pain complaints, are not -- there's not
23 evidence to support the long and chronic use
24 of opioids to effectively manage that pain,
25 as well as there is increased risk of abuse

1 and harm under those circumstances.

2 Again, it's a very small
3 fraction of such patients that may be
4 candidates and have -- demonstrate long-term
5 benefit over time.

6 Q. I may have been inartful in my
7 question, so let me mark this as the next
8 exhibit, which I think is 8.

9 (Schumacher Exhibit 8 marked
10 for identification.)

11 QUESTIONS BY MR. EHSAN:

12 Q. Doctor, what you've been handed
13 is an excerpt exhibit. The first page is the
14 cover page of a textbook --

15 A. That's fine.

16 Q. -- by Dr. Katzung called "Basic
17 & Clinical Pharmacology" --

18 A. Yes.

19 Q. -- copyrighted 2001, and then
20 inside is Chapter 31, which carries as its
21 last author a Mark A. Schumacher.

22 Do you see that?

23 A. Yes, I do.

24 Q. And you are that Mark A.
25 Schumacher; is that right?

1 A. That's correct, yes.

2 Q. Do you recall writing this
3 chapter with your coauthors?

4 A. I remember joining these
5 coauthors in this chapter and participating
6 in the authorship.

7 Q. So I want to focus your
8 attention on a couple of sections in here.

9 On page 523 as paginated in
10 here -- and the page numbers are on the top.
11 Just let me know when you're there.

12 A. Yes.

13 Q. There is a Section F titled
14 "Alternative Routes of Administration."

15 Do you see that?

16 A. Yes, I do.

17 Q. And it talks about, first,
18 rectal suppositories, and we'll skip that.

19 It goes on to state, "Another
20 example is the transdermal patch for systemic
21 effects that provide stable blood levels of a
22 drug and better pain control while avoiding
23 the need for repeated parenteral injections,
24 period."

25 Next sentence, "Fentanyl has

1 been the most successful opioid in
2 transdermal application and finds great use
3 in pain relief for patients experiencing
4 chronic pain, period."

5 Did I read that correctly,
6 Doctor?

7 A. You did.

8 Q. Would you agree that at least
9 as of 2001 that those two sentences were
10 accurate?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: I would agree
13 that as I read this that that depicts
14 the words that were used.

15 It's not my current opinion,
16 and I don't know if you have a copy of
17 the recent edition, but I can't recall
18 how that wording has changed over
19 time.

20 QUESTIONS BY MR. EHSAN:

21 Q. I appreciate that, Doctor.
22 That's why my question was very specific.

23 As of 2001 when this was
24 published, would you agree with me that those
25 two sentences were accurate?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: Again, much like
3 my other testimony, taking a specific
4 sentence or two, it must, as a
5 clinician, be applied to a particular
6 context for patients and what is the
7 indications for their management of
8 their pain.

9 QUESTIONS BY MR. EHSAN:

10 Q. So, Doctor, this chapter is
11 about opioid analgesics and antagonists,
12 correct?

13 A. That's correct, yes.

14 Q. And you have a section in there
15 about alternative routes of administration,
16 correct?

17 A. That is correct, yes.

18 Q. That's not caveated by anything
19 that is in the language of the document
20 because it goes from applications of
21 anesthesia, which is Section E, to Section F,
22 Alternative Routes of Administration,
23 correct?

24 A. That's correct, yes.

25 Q. And the first section is rectal

1 suppositories. And I'm going to assume, and
2 you correct me if I am wrong, that rectal
3 suppositories don't relate to transdermal
4 patches, do they?

5 A. No, but they're intended to
6 provide an example of more continuous
7 administration of opioids.

8 Q. And I suspect reading this, and
9 again, I could be wrong, that these are --
10 these are some examples of nonoral,
11 nonparenteral injection -- administration of
12 opioids that you wanted to discuss, correct?

13 A. That's right. We wanted to
14 make sure the readers were aware of the
15 various formulations and delivery systems,
16 that's correct.

17 Q. And you discuss rectal
18 suppositories, transdermal mechanisms,
19 intranasal and buccal, transmucosal, correct?

20 A. That is correct, yes.

21 Q. And all of these techniques
22 have been or at some point have been
23 available to doctors in the delivery of
24 opioids to patients, correct?

25 A. That's correct.

1 Q. And in the transdermal section,
2 you note that as an example transdermal
3 patches can provide stable blood levels of
4 drug.

5 Do you agree that that's
6 accurate, or was accurate at least as of
7 2001?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: Well, the context
10 within here is relative to parenteral
11 injections; presumably intravenous
12 injections, I think, was the intent of
13 that.

14 QUESTIONS BY MR. EHSAN:

15 Q. Understood.

16 And I think one can appreciate
17 that because you state -- go on to say,
18 "Better control while avoiding the need for
19 repeated parenteral injections."

20 I think the comparator here was
21 parenteral injections versus transdermal
22 delivery, correct?

23 A. That's correct. There is times
24 where we've taken care of very difficult
25 patients with -- again, with cancer who there

1 was -- the oral route or the intravenous
2 route was not really suitable for that
3 clinical case, and so we would turn to a
4 transdermal system to try to provide relief.

5 Q. And that better -- relatively
6 better blood levels would be true regardless
7 of the genesis of the pain the patient is
8 suffering from, correct?

9 A. When we make a comparison
10 between intravenous administration and the
11 transdermal system?

12 Q. That's correct.

13 A. I think that's accurate, yeah.

14 Q. And now, of course, there will
15 be some patients who, for example, are unable
16 to swallow, in which a transdermal system may
17 be preferred because of patient-specific
18 factors, correct?

19 A. That's what I just mentioned in
20 the case of a cancer patient, for example.

21 Q. And you don't have to
22 necessarily have cancer in order to be unable
23 to swallow, correct?

24 A. Again, there's -- from my own
25 clinical experience there's been, again, very

1 rare conditions where we've been faced with
2 that decision, a patient with, for instance,
3 small gut syndrome that they're unable to
4 absorb oral medication, so --

5 Q. Okay. If you had a patient who
6 was NPO for an extended period of time
7 because they were postop, acute pancreatitis,
8 we can come up with lots of hypotheticals,
9 but that patient would not be able to swallow
10 anything by virtue of the NPO status,
11 correct?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: Well, again, in
14 the context of caring for such
15 patients in the setting of a hospital
16 setting, we would not typically think
17 in terms of initiating transdermal
18 system under those conditions. We
19 would typically consider, if
20 necessary, all means to manage their
21 pain, nonopioid, and potentially
22 continuous intravenous or intermittent
23 administration of opioids to better
24 titrate to their needs.
25

1 QUESTIONS BY MR. EHSAN:

2 Q. But in an outpatient setting,
3 you may have a bed-bound patient for a
4 multitude of reasons for whom getting up and
5 getting to a pill container may be
6 problematic, or he or she may lack the
7 ability to adequately swallow for risk of
8 aspiration, correct?

9 MR. LOESER: Objection. Calls
10 for speculation.

11 THE WITNESS: Again, just
12 falling back on my clinical experience
13 and those of my colleagues and the
14 literature that the most common
15 application in this setting is -- in
16 my experience has been in the cancer
17 literature and cancer pain patients
18 with advancing cancer, which affects
19 their ability to swallow or absorb.

20 QUESTIONS BY MR. EHSAN:

21 Q. I understand that your clinical
22 experience is with cancer patients. It's
23 certainly -- there's nothing in the
24 indications that would preclude you from
25 prescribing Duragesic to a cancerous patient.

1 But you would agree with me,
2 Doctor, that there are doctors who do
3 prescribe a Duragesic patch for noncancer
4 indication in outpatient settings, correct?

5 MR. LOESER: Objection. Form.
6 Calls for speculation.

7 THE WITNESS: I'm certainly
8 aware of patients that have been
9 prescribed transdermal fentanyl for a
10 range of conditions; however, it's
11 been my experience and understanding
12 that many of these patients, the
13 transdermal fentanyl therapy, although
14 it may be initially providing some
15 relief, in the long term rarely
16 continues to have the quality of pain
17 control that they initially reported
18 when it was first applied to them.

19 QUESTIONS BY MR. EHSAN:

20 Q. So assuming a patient had
21 good improvements in his or her pain levels
22 initially with transdermal fentanyl, does
23 that make the prescription somehow
24 inappropriate for that patient?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: Well, again, it
2 depends on the clinical context of the
3 particular patient we're discussing,
4 and I'll just leave it at that, yeah.

5 QUESTIONS BY MR. EHSAN:

6 Q. The clinical context would
7 matter, correct?

8 A. Absolutely.

9 Q. Now, if I could have you turn
10 to page 522, which is the prior page.

11 A. Sorry, 5 --

12 Q. 22.

13 A. Okay.

14 Q. And we're looking at the first
15 full paragraph on the right-hand column.
16 Starts with "the pain associated."

17 Do you see that? Right-hand
18 column on 522?

19 A. Oh, the box.

20 Q. First -- no, below the box, the
21 first full paragraph starts, "The pain
22 associated with cancer."

23 Do you see that?

24 A. Yes, I do.

25 Q. There's a discussion here, and

1 let me get -- focus you specifically on the
2 language.

3 It says -- halfway in that
4 paragraph starts the word "research."
5 "Research by workers."

6 Do you see that?

7 A. Yes, I do. Thank you.

8 Q. "Researcher by workers in the
9 hospice movement has demonstrated that fixed
10 interval administration of opioid
11 medications, parentheses, i.e., regular dose
12 at regular time, close paren, is more
13 effective in achieving pain relief than
14 dosing on demand, period."

15 Do you see that?

16 A. I do see that.

17 Q. Are you familiar with that
18 research?

19 A. I'm familiar with those
20 findings, yes.

21 MR. LOESER: And to be clear,
22 you're talking about a 2001 chapter of
23 this book.

24 MR. EHSAN: Understood.

25 MR. LOESER: So you're asking

1 about the research as of that time
2 frame?

3 QUESTIONS BY MR. EHSAN:

4 Q. The research you refer to in
5 this particular section we read, which is
6 from a 2001 chapter, are you familiar with
7 that research?

8 A. Within this edition of this
9 chapter.

10 Q. So would that -- would it be
11 fair to say, Doctor, that in 2001 there was
12 some evidence to suggest that a continuous
13 standing exposure to an opioid may offer some
14 pain control advantages over a PRN or
15 on-demand pain management schedule?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: It is my opinion
18 that in the treatment of end-of-life
19 hospice or cancer patients that have
20 advancing cancer pain, that fixed
21 interval or continuous administration
22 of analgesics or analgesic care is
23 critical, and I acknowledge that the
24 transdermal system or the
25 sustained-release formulations of

1 morphine provided that ability.

2 QUESTIONS BY MR. EHSAN:

3 Q. So there were some implicit
4 reasons, or some reason, to believe that a
5 long-acting formulation may offer advantages
6 for these patients, correct?

7 MR. LOESER: Objection. Form.
8 Mischaracterizes his testimony.

9 THE WITNESS: The
10 characterization of these compounds,
11 of course, are relative to this
12 chapter dedicated to opioids.

13 What is not provided here is
14 relative to what and to the context of
15 what is being treated, as there
16 certainly is other treatment
17 modalities in addition to opioids for
18 some of these patients.

19 QUESTIONS BY MR. EHSAN:

20 Q. Right, Doctor.

21 And I think you mentioned
22 somewhere in your report, for almost all
23 conditions opioids are not -- all chronic
24 noncancer pain conditions, opioids aren't
25 considered first-line therapies, correct?

1 That was something you said in
2 your report, correct?

3 A. That's what I recall, yes.

4 Q. And likewise, as we read in the
5 Duragesic label, Duragesic, at least under
6 the discussion we had of the 2005 label,
7 wasn't indicated for patients who weren't
8 already opioid-tolerant, correct?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: We did discuss
11 the black box warning and also noted
12 that the 2005 indicated that the
13 patient should provide some so-called
14 evidence of opioid tolerance, which
15 has been defined by 60 OMEs a day for
16 a week, that's correct.

17 QUESTIONS BY MR. EHSAN:

18 Q. So it is, at least putting all
19 this together, unlikely that a patient would
20 get a prescription for Duragesic as a
21 first-line, never tried any other analgesic
22 medication, never tried an opioid before,
23 correct?

24 MR. LOESER: Objection. Form.

25 Assumes facts not in evidence.

1 THE WITNESS: Honestly, I'm
2 unclear when Duragesic added the
3 additional information related to
4 opioid tolerance development as a
5 requirement for starting this
6 medication relative to the time this
7 article was written.

8 QUESTIONS BY MR. EHSAN:

9 Q. So the article was -- or the
10 chapter was in 2001, but we'll just focus on
11 2005, so it's a four-year gap. And I'm sorry
12 these labels don't match up exactly with the
13 chapter here.

14 But at least as of 2005, it is
15 unlikely someone would have received an
16 opioid prescription for Duragesic without
17 ever having at least tried and failed some
18 other medications, at least if the doctor
19 prescribed it as indicated, correct?

20 MR. LOESER: Objection. Calls
21 for speculation.

22 THE WITNESS: I don't know. I
23 don't know the literature that's
24 tracked these -- the prescription to
25 such patients.

1 QUESTIONS BY MR. EHSAN:

2 Q. Well, let's just be a little
3 bit more specific.

4 If you look at Exhibit 7, under
5 the middle of that column and then going back
6 to the indications, it says, "As indicated,
7 when the -- for chronic pain that cannot be
8 managed by other means," and it provides some
9 examples.

10 So would you agree with me,
11 Doctor, that if a physician prescribed
12 Duragesic in a patient that had not been
13 attempted to be managed by other means, that
14 this would be an off-label prescription, at
15 least as of 2005?

16 MR. LOESER: Objection.

17 Outside the scope of his report.

18 THE WITNESS: That's outside
19 the scope of my report to comment.

20 QUESTIONS BY MR. EHSAN:

21 Q. Doctor, do you understand what
22 an off-label prescription is?

23 A. I believe it's the use of a
24 drug that goes beyond the initial FDA
25 approval process.

1 Q. Do you have occasion to
2 prescribe medications off-label in your
3 clinical practice?

4 A. There's a majority, frankly, of
5 medications used clinically that have been
6 used in different off-label manners, for
7 example, in the treatment of -- well, I'll
8 just stop there.

9 Q. So is it your opinion, Doctor,
10 that it is commonplace for physicians to
11 prescribe medications off-label?

12 MR. LOESER: Objection to form.

13 THE WITNESS: I would say that
14 it is a practice of physicians. I
15 can't characterize it as common.

16 QUESTIONS BY MR. EHSAN:

17 Q. And to the extent that
18 medication is being prescribed off-label,
19 that means that at least the manufacturer
20 didn't submit to the Food and Drug
21 Administration sufficient information to
22 justify a label change for that medication
23 for that indication, correct?

24 MR. LOESER: Objection as to
25 form. It's outside the scope of his

1 report.

2 THE WITNESS: That's outside
3 the scope of my opinion.

4 QUESTIONS BY MR. EHSAN:

5 Q. You don't understand how an
6 indication gets on a label for a medication,
7 Doctor?

8 MR. LOESER: Same objection.

9 THE WITNESS: I would say that
10 the practice of medicine relative to a
11 physician's decision to use something
12 off-label would need to be supported
13 by the scientific evidence that
14 there's efficacy and its risk of harm
15 is low.

16 MR. LOESER: We've been going
17 about an hour, so when you have a --

18 MR. EHSAN: Sure.

19 THE WITNESS: Yeah, actually
20 that would be good. Could we take a
21 break? That would be --

22 MR. EHSAN: Yeah, sure.

23 THE WITNESS: I appreciate
24 that.

25 VIDEOGRAPHER: Okay. We are

1 now going off the record, and the time
2 is 3:0 -- 4:01 p.m.

3 (Off the record at 4:01 p.m.)

4 VIDEOGRAPHER: We are now going
5 back on the record, and the time is
6 4:17 p.m.

7 QUESTIONS BY MR. EHSAN:

8 Q. Dr. Schumacher, focusing your
9 attention back on Exhibit 8, if you could
10 look at page 525 as paginated.

11 I think this is towards --
12 well, kind of close to the end, but not
13 really. Let me know when you're there.

14 A. Yes, 525.

15 Q. Yes.

16 And you see in the left column
17 there is -- the first full paragraph, there's
18 some language that is in italics.

19 Do you see that?

20 A. Yes, I do.

21 Q. Let me just start from the
22 beginning of that paragraph so I can read the
23 complete thing.

24 But it starts with, "Obviously,
25 the risk of causing dependence is an

1 important consideration in the therapeutic
2 use of these drugs, period."

3 Did I read that correctly?

4 A. That's correct, you did read
5 this correctly.

6 Q. And "these drugs" is referring
7 to opioids; is that correct?

8 A. Say it --

9 Q. "These drugs" is making
10 reference to opioid medicines, correct?

11 A. Yes.

12 Q. And it goes on to say -- and
13 this is the part that's italicized: "Despite
14 that risk, under no circumstances should
15 adequate pain relief ever be withheld simply
16 because an opioid exhibits potential for
17 abuse or because legislative controls
18 complicate the process of prescribing
19 narcotics, period."

20 Did I read that correctly?

21 A. You did, yes.

22 Q. And it goes on to say,
23 "However, certain principles can be observed
24 by clinician -- by the clinician to minimize
25 problems presented by tolerance and

1 dependence when using opioid analgesics,
2 colon."

3 Did I read that correctly,
4 Doctor?

5 A. That's correct.

6 Q. At the time you wrote this, did
7 you believe that despite the risk of
8 dependence and addiction, under no
9 circumstances should adequate pain relief
10 ever be withheld simply because an opioid
11 exhibits potential for abuse or because
12 legislative controls complicate the process
13 of prescribing narcotics?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: The context of
16 this chapter was in the acute pain --
17 acute management -- management of
18 acute pain, principally, as the lead
19 author was an anesthesiologist whose
20 primary focus had been perioperative.

21 Nevertheless, we would never
22 restrict the use of an opioid simply
23 because a patient has a risk of
24 addiction or has known addiction when
25 treating acute pain or cancer pain or

1 end-of-life care. Certainly have been
2 in numerous, you know, clinical
3 situations like that.

4 QUESTIONS BY MR. EHSAN:

5 Q. Would there be a situation in
6 which case you would let a patient suffer
7 from pain because of the risk of addiction
8 from opioids?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: I would -- as a
11 physician and a pain physician, I do
12 everything possible to manage
13 someone's pain with all valuable and
14 available resources that include
15 opioids and may include nonopioid
16 strategies in that setting.

17 QUESTIONS BY MR. EHSAN:

18 Q. And then you go on after to
19 highlight -- or to italicize a section to
20 discuss that there are certain principles
21 that a physician can observe, or clinician
22 can observe, to minimize problems of
23 tolerance and dependence, correct?

24 A. For this chapter, that's
25 correct, yes.

1 Q. And you list those A through D,
2 correct?

3 A. My coauthors as well, yes,
4 listed those as steps to take as part of the
5 management of an opioid or an analgesic.

6 Q. And when you and your coauthors
7 wrote this chapter, did you believe that
8 those principles enumerated in A through D
9 were effective in potentially reducing the
10 risk of tolerance and dependence in opioid
11 users?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: If you give me a
14 moment just to reread through them
15 again.

16 QUESTIONS BY MR. EHSAN:

17 Q. Sure.

18 A. It's been a while. Thank you.

19 Sorry, would you mind repeating
20 the question, please?

21 Q. Sure.

22 I was going to say items
23 enumerated in A through D in this -- on this
24 page were factors that you believed at the
25 time would be effective, or potentially

1 effective, in minimizing the tolerance and
2 dependence on opioids in patients needing
3 to -- opioid therapy for pain, correct?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: Well, I believe
6 that many of these points are -- have
7 clinical validation and are important
8 features in the management of pain,
9 whether it's opioids or other
10 nonopioid therapies.

11 The est -- pardon me -- the
12 establishment of therapeutic goals
13 before starting opioid therapy is, in
14 fact, a tenet within the current CDC
15 guidelines; however, as you know CDC
16 guidelines do not promote opioids as a
17 first-line therapy for chronic
18 noncancer pain.

19 At this time the idea and the
20 use of the word "dependence" I believe
21 at that time implied addiction or
22 abuse as well rather than purely
23 physical dependence limited to
24 withdrawal symptoms.

25 Nonetheless, the way this is

1 written, of course, does not
2 acknowledge that the fact that a
3 patient will likely develop opioid
4 tolerance and the effectiveness of the
5 initial therapy will likely lose
6 efficacy over time, and so at many
7 points have changed since these items
8 have been inserted in this particular
9 part.

10 QUESTIONS BY MR. EHSAN:

11 Q. Let me back up and ask the
12 question slightly differently, Doctor.

13 As of 2001, did you believe
14 that items enumerated A through D were valid
15 considerations in trying to minimize
16 tolerance and dependence, meaning opioid use
17 disorder, by today's standards in connection
18 with opioid therapy in patients?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: I believe they
21 were valuable points to make to the
22 reader for the overall management of
23 analgesic care and opioid therapy.

24 And in particular, although we
25 did not prioritize, of course, we --

1 in C we said instead of opiate
2 analgesic, especially in chronic
3 management, consider using other types
4 of analgesics or compounds exhibiting
5 less pronounced withdrawal symptoms on
6 discontinuation.

7 So even at this earlier version
8 of this chapter, there was an
9 acknowledgement for chronic management
10 was going to be likely different and
11 require a different treatment plan
12 approach.

13 QUESTIONS BY MR. EHSAN:

14 Q. So let me back up, because I
15 don't think you answered my question exactly.

16 Would you agree that you
17 believed at the time that you wrote these,
18 these were effective strategies in attempting
19 to limit tolerance and dependence in patients
20 exposed to opioid therapy?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: Well, I wouldn't
23 use that language. I think, again,
24 going back to the chapter itself, you
25 know, certain principles can be

1 observed by the clinicians to
2 minimize -- minimize problems
3 presented by tolerance and dependence
4 when using opioid analgesics. So it
5 was providing some guidance to
6 minimize. It did not say eliminate.

7 QUESTIONS BY MR. EHSAN:

8 Q. And I think I said mitigate. I
9 apologize. I'll use the word "minimize" from
10 now on.

11 A. Okay.

12 Q. But you stand by the language,
13 though, that it would minimize the problems
14 presented by tolerance and dependence,
15 correct?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: I guess, again,
18 the context of this is relative to
19 what? And this is always the
20 difficulty in taking something sort of
21 in a textbook into a broad clinical
22 application to all patients that might
23 have pain or chronic pain.

24 And again, I think these are
25 guideposts for physicians to consider

1 when they are prescribing opioids.

2 QUESTIONS BY MR. EHSAN:

3 Q. These guideposts, were these
4 guideposts that a primary care physician or a
5 non-pain specialist could understand and
6 implement in his or her own practice?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: The target
9 audience for this chapter is
10 principally medical students and
11 potentially -- well, it's principally
12 medical students in undergrad medical
13 education with the understanding that
14 such training physicians begin to
15 appreciate that there is complexities
16 to opioid prescribing and alert them
17 that problems of tolerance and
18 dependence need to be addressed.

19 QUESTIONS BY MR. EHSAN:

20 Q. And in Item C, which you, I
21 think, referenced in one of your prior
22 answers, you talk about that, the potential
23 use of other nonopioids in chronic management
24 of pain.

25 Do you see that language there?

1 A. Yes, I do. Yeah.

2 Q. It doesn't say, though, that
3 you should not use opioids in chronic
4 noncancer pain, period, right?

5 MR. LOESER: Objection. Form.

6 THE WITNESS: It -- as you
7 stated, it does not say that.

8 QUESTIONS BY MR. EHSAN:

9 Q. It says consider using other
10 medications, correct?

11 A. Well, C starts with "instead of
12 opioid analgesics, especially in chronic
13 management." I believe the context there is
14 that chronic pain management is a unique
15 subset, as I recall, and the intent of this
16 writing.

17 Q. And it goes on to say,
18 "Consider using other types of analgesic --
19 analgesics or compounds," correct?

20 A. That's correct.

21 Q. Now, if I turn your attention
22 to page 522, same document still. Let me
23 know when you're there.

24 A. Yes. Thank you.

25 Q. So we're looking at the

1 left-hand column.

2 A. Uh-huh.

3 Q. The last full paragraph before
4 the section that has the title "Clinical Use
5 of Opioid Analgesics."

6 A. Okay.

7 Q. So that paragraph starts with
8 Table 31-1.

9 Do you see that?

10 The wording on that paragraph
11 starts with Table 31-1, shows the range.

12 Do you see that?

13 A. Wait, I may not be on the --

14 Q. Sure. Page --

15 A. There's a 31-4 table.

16 Q. No. No. So page 522.

17 A. Yep.

18 Q. The left-hand column.

19 A. Uh-huh. Oh, in the text.

20 Q. The paragraph in the text of
21 the paragraph. So I'm not referring to the
22 table.

23 A. Oh, I see it now. Yeah.

24 Sorry. Got it.

25 Q. The sentence that says 31.

1 A. Yeah. Got it.

2 Q. So that paragraph there.

3 If you go halfway down the
4 paragraph, a little bit more perhaps, the
5 sentence that starts "the most common error."

6 Do you see that?

7 A. Oh, yes, sure.

8 Q. It states, "The most common
9 error made by physicians in using opioid
10 analgesics is a failure to provide sufficient
11 dose to achieve optimal relief, period."

12 And it goes on to say,
13 "Patients vary widely in their response, so
14 dosing must be individualized for each,
15 period."

16 Did I read that correctly,
17 Doctor?

18 A. That's -- you did, thank you.

19 Q. And at the time you wrote this
20 in 2001, did you understand what you state to
21 be accurate?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: Again, the
24 context here was in the context of
25 treating acute pain and cancer pain.

1 That was the drivers for, as I recall
2 for this section; that is, acute pain
3 management being undertreated with, in
4 this example, with opioids.

5 QUESTIONS BY MR. EHSAN:

6 Q. My question was slightly
7 different, Doctor.

8 My question was: When you
9 wrote that statement, was that an accurate
10 statement based on your understanding of the
11 state of science?

12 MR. LOESER: Objection. Form.
13 Asked and answered.

14 THE WITNESS: Again, the
15 accuracy of that statement and my
16 support of it is in the context that
17 the -- this chapter and that section
18 was intended to be principally
19 understood in the setting of the
20 treatment of acute and cancer pain.

21 QUESTIONS BY MR. EHSAN:

22 Q. If you go back to the prior
23 page, 521, the section heading --

24 A. Uh-huh.

25 Q. -- is "Clinical Pharmacology of

1 Opioid Analgesics"; is that correct?

2 A. That is correct, yes.

3 Q. And the first sentence there
4 is, "The management of pain is essential to
5 good clinical practice and requires careful
6 consideration of the proper dose, type of
7 drug and the disease being treated," correct?

8 A. That's correct, yes.

9 Q. Is there -- and you are -- is
10 it your opinion, Doctor, that this section
11 was meant by that language to be restricted
12 to cancer or acute inpatient care of pain?

13 MR. LOESER: Objection. Form.

14 THE WITNESS: So sorry. Could
15 you repeat that?

16 QUESTIONS BY MR. EHSAN:

17 Q. Sure.

18 Is it your opinion, Doctor,
19 that the language in the chapter that -- or
20 on page 522 that we read was meant to be
21 restricted to acute inpatient care -- pain
22 management or cancer pain management by
23 virtue of the heading of "Clinical
24 Pharmacology of the Opioid Analgesics"?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: Well, the
2 statement, of course, is very general,
3 and I would again have to fall back to
4 the concept that the safe practice of
5 analgesic care depends on the clinical
6 context for a particular patient and
7 their disease process, whether it's
8 acute or chronic. And I'm afraid
9 these -- this chapter and some of the
10 readings do not make that distinction.

11 QUESTIONS BY MR. EHSAN:

12 Q. Doctor, when you wrote this
13 chapter in 2001, were you -- did you receive
14 any payment for your work?

15 MR. LOESER: Objection. Form.

16 THE WITNESS: Right. So when I
17 joined this paragraph with the other
18 senior professors, I believe there was
19 a shared royalty that was based on its
20 distribution and sales. That's
21 correct.

22 QUESTIONS BY MR. EHSAN:

23 Q. Were you -- did you receive any
24 remuneration that you understand came from
25 any pharmaceutical company?

1 A. I don't know.

2 Q. Do you believe if a
3 pharmaceutical company relied on this
4 textbook or excerpted language from this
5 textbook in any of their promotional material
6 that they would be misleading or otherwise
7 providing false information to prescribers or
8 patients?

9 MR. LOESER: Objection. Calls
10 for speculation.

11 THE WITNESS: I don't know.

12 MR. EHSAN: Doctor, I think
13 that is all I have, so we can take a
14 break and do another round of musical
15 chairs.

16 THE WITNESS: Okay.

17 VIDEOGRAPHER: We are now going
18 off the record, and the time is
19 4:34 p.m.

20 (Off the record at 4:34 p.m.)

21 VIDEOGRAPHER: We are now going
22 back on the record, and the time is
23 4:41 p.m.

24 CROSS-EXAMINATION

25 QUESTIONS BY MR. STAMPFL:

1 Q. Good afternoon, sir, Karl
2 Stampfl. I represent the Allergan
3 defendants.

4 Do you have your report which I
5 believe is part of Exhibit 1 in front of you?

6 A. That's right.

7 Q. Could you look at page 6,
8 footnote 1? We've looked at a couple times
9 today.

10 Do you see there that you refer
11 to Allergan and Actavis as among the
12 defendants in this case?

13 A. That's correct.

14 Q. Sitting here today, can you
15 think of any other reference to Allergan or
16 Actavis within the body of your report?

17 A. Can you give me a moment just
18 to reflect on --

19 Q. Well, let me cut through it a
20 little bit.

21 Recognizing that you won't have
22 a chance to look through every paragraph or
23 everything, can you think of any other
24 references to Allergan or Actavis in your
25 report?

1 MR. LOESER: Objection. Form.

2 QUESTIONS BY MR. STAMPFL:

3 Q. Sir, I'm not asking you to look
4 through every page of your report. I'm just
5 asking: Without looking through every page
6 of your report, can you think of any, off the
7 top of your head, references to Allergan or
8 Actavis in the body of your report?

9 MR. LOESER: So you're asking
10 if he can remember something in the
11 report, not whether it's actually in
12 the report?

13 MR. STAMPFL: That's right,
14 though I think it might be indicative
15 of whether it's in the report.

16 MR. LOESER: Well --

17 THE WITNESS: Well, I would
18 need, again, to check within the
19 exhibits.

20

21 QUESTIONS BY MR. STAMPFL:

22 Q. Putting side the exhibits, just
23 within the body of your report --

24 A. Not in the exhibits, but in the
25 report itself --

1 Q. In the report, yeah.

2 A. -- I don't recall any reference
3 to --

4 Q. Allergan or Actavis?

5 A. Allergan, yes.

6 Q. Did you know that Allergan sold
7 opioids prior to your involvement in this
8 case?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: I was unaware.

11 QUESTIONS BY MR. STAMPFL:

12 Q. What opioids or opioid does
13 Allergan sell?

14 A. I believe it sells Kadian.

15 Q. Can you identify any others?

16 A. That's the prominent one I'm
17 familiar with.

18 Q. You can't think of any others
19 sitting here today, right?

20 MR. LOESER: Objection. Asked
21 and answered.

22 THE WITNESS: Again, Kadian is
23 what's on the top of the list that I'm
24 familiar with.
25

1 QUESTIONS BY MR. STAMPFL:

2 Q. You said earlier during your
3 testimony that the driving force of the
4 opioid epidemic has been the promotion for
5 chronic noncancer pain.

6 Can you point --

7 MR. LOESER: Objection. Form.

8 QUESTIONS BY MR. STAMPFL:

9 Q. Do you recall that testimony?

10 A. The promotion of opioids for
11 chronic noncancer pain, that's correct.

12 Q. That's right.

13 Can you point to any statements
14 that Allergan or Actavis made at any time
15 where they promoted opioids for chronic
16 noncancer pain?

17 MR. LOESER: Are you asking if
18 he can point to something in his
19 report?

20 MR. STAMPFL: I'm asking
21 whether he can point to any statements
22 by Allergan or Actavis, sitting here
23 today, where they promoted opioids for
24 chronic noncancer pain.

25 THE WITNESS: Just give me a

1 moment. I'll have a quick look here.

2 QUESTIONS BY MR. STAMPFL:

3 Q. Okay.

4 A. Within Exhibit A, Sales
5 Training and Promotional Materials, 1.6,
6 "Kadian patients experience sustained
7 morphine release with less fluctuations
8 versus morphine sulfate. Kadian patients
9 report improved management of pain versus
10 morphine sulfate. Kadian patients require
11 less rescue medications versus morphine
12 sulfate."

13 And then the 1.7, "Kadian
14 provides steady blood levels of morphine
15 sulfate with few peaks and valleys."

16 Q. Yes, sir.

17 So my question was about
18 chronic noncancer pain. And you'd agree that
19 the phrase "chronic noncancer pain" doesn't
20 appear in either 1.6 or 1.7 of your
21 Exhibit A, correct?

22 A. That is true, it does not
23 appear there.

24 Q. So sitting here today, can you
25 identify any statements by Allergan or

1 Actavis promoting opioids for the use -- for
2 the treatment of chronic noncancer pain?

3 MR. LOESER: Objection. Form.

4 The witness is reviewing the
5 materials.

6 THE WITNESS: I would still
7 like to review a little bit more,
8 please.

9 QUESTIONS BY MR. STAMPFL:

10 Q. Go ahead.

11 Sir, we just don't have time
12 for you to go through every page in your
13 report, so I'm just asking you: Without
14 going through every page -- we understand
15 that will be part of the record -- are you
16 able to point to any such statements by
17 Allergan or Actavis?

18 MR. LOESER: And I'll just note
19 for the record that you've stopped the
20 witness from continuing to review
21 where he can identify other references
22 to your client.

23 MR. STAMPFL: Yes, sir, I
24 thought that was clear from my
25 question.

1 QUESTIONS BY MR. STAMPFL:

2 Q. Could you go ahead and answer,
3 please?

4 MR. LOESER: Well, I'm making
5 clear from the question that there
6 actually are other references, but
7 you've stopped him from finding them.

8 THE WITNESS: The other
9 references that are at 1.32 and 1.33
10 concerning Allergan focus on the
11 product relative to its risk of
12 addiction, but I do not see any of the
13 words that you mention about chronic
14 noncancer pain.

15 QUESTIONS BY MR. STAMPFL:

16 Q. Okay. And could you look at
17 paragraph 56 of your report -- excuse me, 59
18 of your report?

19 A. Sorry, again, where do you want
20 me to go?

21 Q. Paragraph 59 of your report.

22 A. Paragraph 59. Okay.

23 Yes, I have it in front of me.

24 Q. Thank you.

25 Do you see that you write,

1 "Purdue and other defendants utilized a
2 number of approaches to encourage physicians
3 to prescribe opioids broadly for the
4 treatment of chronic pain. They engaged in
5 direct-to-consumer marketing."

6 Do you see that?

7 A. Yes, I do.

8 Q. Can you identify any
9 direct-to-consumer marketing performed by
10 Allergan or Actavis?

11 MR. LOESER: Do you want him to
12 review the report?

13 MR. STAMPFL: His entire
14 report?

15 QUESTIONS BY MR. STAMPFL:

16 Q. Well, sir, are you familiar
17 with what's in your report?

18 A. I am familiar with what's in my
19 report in terms of certain details.
20 Sometimes I need to go back to refresh my
21 memory.

22 Q. Without looking through your
23 entire report, can you point to any
24 direct-to-consumer marketing that Allergan or
25 Actavis engaged in?

1 A. I have not included any
2 examples of marketing efforts within the
3 report from Allergan or Actavis.

4 MR. LOESER: And to be clear,
5 again, you're asking about the report
6 and not the attached exhibits?

7 MR. STAMPFL: I'm asking him
8 whether he can identify that.

9 MR. LOESER: Well, you're
10 asking him, but you've also stopped
11 him from reviewing the report to find
12 the references.

13 So if you want -- if you want
14 to ask him a question that requires
15 him to tell you what's in his report
16 but you won't let him look through the
17 references, then you're denying him
18 the ability to answer your question.

19 MR. STAMPFL: Sir, I disagree.
20 I said "without looking through the
21 report."

22 But in any case, you can
23 object, but we're going to move on.

24 QUESTIONS BY MR. STAMPFL:

25 Q. You continue here on page 59,

1 "They funded" -- are you with me, sir?

2 A. Paragraph 59?

3 Q. Yes, thank you.

4 A. Okay.

5 Q. "They funded research,
6 pain-related medical societies and continuing
7 medical education, lobbied medical boards and
8 agencies responsible for pain-related
9 treatment guidelines, and lobbied state and
10 local government to remove barriers to
11 broader use of opioids for the treatment of
12 pain."

13 Do you see that?

14 A. Yes, I do.

15 Q. Can you think of any
16 inappropriate research that Allergan or
17 Actavis funded with respect to opioids?

18 MR. LOESER: I have the same
19 objection.

20 THE WITNESS: I'm not aware.

21 QUESTIONS BY MR. STAMPFL:

22 Q. Can you think of any
23 pain-related medical societies that Allergan
24 or Actavis funded?

25 A. I'm aware that multiple drug

1 companies were reviewed and included in the
2 Senate subcommittee report on the influence
3 of pharmaceutical companies influencing
4 medical societies and education.

5 I can't recall the detail that
6 Actavis or Allergan was amongst those.

7 Q. So sitting here today, can you
8 identify any pain-related medical societies
9 that Allergan or Actavis funded?

10 MR. LOESER: Objection. Form.

11 THE WITNESS: I don't know.

12 MR. LOESER: Mischaracterizes
13 his testimony.

14 QUESTIONS BY MR. STAMPFL:

15 Q. Can you identify any continuing
16 medical education that Allergan or Actavis
17 funded?

18 MR. LOESER: Same objection.

19 THE WITNESS: I don't know.

20 QUESTIONS BY MR. STAMPFL:

21 Q. Can you identify even one
22 prescriber in Cuyahoga or Summit Counties who
23 received any misstatements from Allergan or
24 Actavis?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: If you'll allow
2 me to look.

3 I do not have any documentation
4 to support that.

5 QUESTIONS BY MR. STAMPFL:

6 Q. Can you identify any -- a
7 single prescription that was written in
8 Cuyahoga or Summit Counties as a result of
9 anything that Allergan or Actavis did?

10 A. That's beyond the scope of my
11 report. I have no opinion on that.

12 Q. So the answer is, no, you can't
13 identify any such prescription?

14 MR. LOESER: Objection. Asked
15 and answered.

16 THE WITNESS: It was beyond the
17 scope of my report. I have no opinion
18 on that.

19 QUESTIONS BY MR. STAMPFL:

20 Q. Can you identify one or not?

21 MR. LOESER: Objection. Asked
22 and answered.

23 THE WITNESS: I've answered
24 your question.
25

1 QUESTIONS BY MR. STAMPFL:

2 Q. Respectfully, sir, I think I'm
3 entitled to a direct answer to that question.

4 Putting aside whether you
5 believe it's within the scope of your report,
6 my question is: Can you, sitting here today,
7 identify a single prescription in Cuyahoga or
8 Summit Counties that was written as a result
9 of anything Allergan or Actavis did?

10 MR. LOESER: Objection. Asked
11 and answered.

12 THE WITNESS: Relative to my
13 preparation, I have not identified
14 such a prescription as you stated.

15 QUESTIONS BY MR. STAMPFL:

16 Q. Can you take out Exhibits 3 and
17 4 to the deposition here today, which are
18 your list of materials considered and then I
19 believe the supplemental list that you
20 submitted later?

21 A. Exhibits 3 and 4?

22 Q. Yes, please.

23 A. Okay. All right. I have those
24 in front of me.

25 Q. And do you see that if you look

1 on, I believe, it's page 25 of Exhibit 3,
2 there's your list of Bates-stamped documents.

3 A. That's correct.

4 Q. And that's the list of
5 documents produced by defendants and others
6 that you considered in forming your opinions,
7 correct?

8 A. These are materials that were
9 provided by counsel for my review, yes.

10 Q. And this list includes six
11 documents produced by Allergan or Actavis,
12 correct?

13 MR. LOESER: Objection. Form.

14 THE WITNESS: That's right,
15 yes. Pardon me, sorry. Yes, that's
16 correct, yeah.

17 QUESTIONS BY MR. STAMPFL:

18 Q. Okay. Thank you.

19 You didn't consider any other
20 Allergan or Actavis-produced documents beyond
21 those six, correct?

22 A. As part of the preparation of
23 this report, these were the documents I
24 reviewed, that's correct.

25 Q. Are you aware that Allergan and

1 Actavis produced hundreds of thousands, if
2 not millions, of documents in this case?

3 MR. LOESER: Objection to form.

4 THE WITNESS: I'm a little
5 confused. I'm not sure what documents
6 you're trying to describe.

7 QUESTIONS BY MR. STAMPFL:

8 Q. Yeah, right. Okay.

9 So I'm asking: Are you aware
10 that Allergan and Actavis produced not just
11 six documents in this case but rather
12 hundreds of thousands of documents?

13 A. I wasn't aware of the number of
14 documents that Actavis and Allergan had
15 produced.

16 Q. You know it's more than six,
17 right?

18 MR. LOESER: Objection. Form.
19 Assumes facts not in evidence.

20 THE WITNESS: I am now informed
21 based on what you told me.

22 QUESTIONS BY MR. STAMPFL:

23 Q. Did you ever ask counsel for
24 any additional documents produced by Allergan
25 or Actavis, or do you think maybe these were

1 the only six?

2 MR. LOESER: Objection.

3 And I'm instructing the witness
4 not to answer any question about what
5 you asked us or what we told you.

6 So don't answer the question.

7 QUESTIONS BY MR. STAMPFL:

8 Q. Are you accepting your
9 counsel's instruction?

10 A. Yes.

11 Q. So all of the six documents
12 that you considered that were produced by
13 Allergan or Actavis were provided by the
14 lawyers for the plaintiffs, right?

15 A. They were provided by counsel,
16 that's correct.

17 Q. Did you take any steps to
18 determine whether plaintiffs' lawyers were
19 giving you a representative sample of
20 Allergan or Actavis documents?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: Sorry, could you
23 repeat the question, please?

24 QUESTIONS BY MR. STAMPFL:

25 Q. Yeah.

1 Did you take any steps to
2 determine whether plaintiffs' counsel was
3 giving you a representative sample of
4 Allergan or Actavis documents?

5 MR. LOESER: Objection. Form.

6 THE WITNESS: I made no such
7 request for additional Allergan or
8 Actavis documents.

9 QUESTIONS BY MR. STAMPFL:

10 Q. You know, in your testimony
11 here today, you've referred to the importance
12 of the context of prior statements, right?

13 MR. LOESER: Objection. Form.
14 Mischaracterizes his testimony.

15 THE WITNESS: I have
16 occasionally raised the point of a
17 clinical context to better clarify a
18 particular phrase that was buried in a
19 paragraph.

20 QUESTIONS BY MR. STAMPFL:

21 Q. Do you think that defendants'
22 statements, too, should be considered in
23 their full and proper context?

24 MR. LOESER: Objection. Form.
25 Mischaracterizes his testimony.

1 THE WITNESS: I don't know.

2 That is outside the scope of my
3 opinion, and I'm not sure how to
4 respond to that.

5 The context, clinical context,
6 of some of these, the meaning of some
7 of these paragraphs and the meanings
8 of their effects on clinical care,
9 it's difficult for me to form a
10 relationship of that to your question
11 about companies and their
12 decision-making.

13 QUESTIONS BY MR. STAMPFL:

14 Q. Okay. Well, let me take it
15 outside of the context of your -- excuse me,
16 the context of your prior testimony.

17 Do you think it's important
18 when you're considering defendants' marketing
19 statements to consider them in their full and
20 proper context?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: I would have to
23 say it depends on what the statement
24 is.

25

1 QUESTIONS BY MR. STAMPFL:

2 Q. So you think there's some
3 occasions where you could look at a marketing
4 material or a sentence from a marketing
5 material and you wouldn't need to consider
6 the context of it? Is that your testimony,
7 sir?

8 MR. LOESER: Objection. Form,
9 and it mischaracterizes his testimony.

10 THE WITNESS: I would say that
11 there's certain examples of, like,
12 sales call reps that I've previously
13 mentioned that to me stand on their
14 own. They don't need particular
15 context to provide a message.

16 Again, back to -- in Exhibit B,
17 "Doctor has a ton of Vicodin patients.
18 A lot of low back pain. Leery of
19 Class II. Use PI, product
20 information. Sell low abuse and Q12.
21 Doctor agreed to use for all his low
22 back pain instead of Vicodin. Keep on
23 this guy. This is easy money."

24 To me, I don't -- it's hard for
25 me as a physician, as a human being,

1 to understand what other context there
2 would be for that phrase, other than
3 promoting a product for its financial
4 value over the impact or the health of
5 the patient it's going to.

6 QUESTIONS BY MR. STAMPFL:

7 Q. So you referred to Exhibit B in
8 your answer just now, and this is -- this has
9 what you characterize as examples of
10 defendants' salespeople call notes reflecting
11 efforts to trivialize the risk of addiction
12 and exaggerate the benefits of chronic opioid
13 use, correct?

14 A. That's correct.

15 Q. So this is where you set out
16 the call notes that you considered and you
17 wanted to point out as examples, right?

18 A. As examples, that's correct,
19 sure.

20 Q. Okay. But this exhibit doesn't
21 contain any Allergan or Actavis call note?

22 A. That's correct.

23 Q. Can you identify, sitting here
24 today, any Allergan or Actavis call notes
25 that reflected efforts, as you put it, to

1 trivialize the risk of addiction?

2 A. If you'll give me one moment,
3 please.

4 No, I do not have an example of
5 that. Thank you.

6 Q. Can you identify any Allergan
7 or Actavis call notes that exaggerate the
8 benefits of chronic opioid use, as you put in
9 your report?

10 MR. LOESER: Objection. Form.

11 THE WITNESS: I don't recall if
12 there's any inclusions of that
13 specific language in there, as
14 examples in the report.

15 QUESTIONS BY MR. STAMPFL:

16 Q. And there are no call notes by
17 Allergan or Actavis at all in Exhibit B to
18 your report?

19 A. That's what I see as well, yes.

20 Q. So can you, sitting here today,
21 identify any Allergan or Actavis call notes
22 that exaggerate the benefits of chronic
23 opioid use?

24 A. Not within this report.

25 Q. Anywhere?

1 A. Not within my exhibits.

2 Q. Anywhere in the world, can you
3 point to any example of any Allergan or
4 Actavis call notes that exaggerates the
5 benefits of chronic opioid use?

6 MR. LOESER: Object to the form
7 of the question, and it exceeds the
8 scope of his report.

9 If you're asking him to review
10 the millions of pages you referenced,
11 I suppose he could do that.

12 MR. STAMPFL: Well, I would
13 have expected him to do that before
14 you put in your opinions about
15 Allergan and Actavis.

16 QUESTIONS BY MR. STAMPFL:

17 Q. Did you do that, sir?

18 A. Within the scope of my report
19 and preparation, I did not review all
20 potential call notes and reports from
21 Allergan or Actavis.

22 Q. Did you review any call notes
23 from Allergan or Actavis?

24 A. I can't recall.

25 Q. You don't recall doing that

1 sitting here today, right?

2 MR. LOESER: Objection. Asked
3 and answered.

4 THE WITNESS: Again, I can't
5 recall. I looked at a lot of notes,
6 hundreds of notes, but I can't recall
7 the specific manufacturer or their
8 abbreviation as it related to a
9 particular comment.

10 QUESTIONS BY MR. STAMPFL:

11 Q. Okay. Could you look at
12 Exhibit A to your report? That's --

13 A. Exhibit A?

14 Q. Yes, please, sir.

15 And Exhibit A purports to set
16 out examples of promotional statements or
17 materials used by defendants in which the
18 risk of addiction is downplayed and the
19 benefits to patients exaggerated, correct?

20 A. Sure, yes.

21 Q. Okay. Besides anything that
22 you set out in Exhibit A, can you think of
23 any other promotional statements or materials
24 used by Allergan or Actavis in which the risk
25 of addiction is downplayed?

1 A. Excluding those that are
2 already listed in Exhibit A?

3 Q. Yes, sir, to the extent there
4 are any.

5 A. Again, I've previously noted
6 1.6 and 1.7. Beyond -- sorry. There's
7 also -- within 1.32 and 1.33, there's also
8 examples of that.

9 But you're asking if there's
10 something beyond in -- within this exhibit.

11 Q. Yes, sir.

12 A. Not that I recall.

13 Q. Are you aware that three of the
14 six documents that had Allergan or Actavis
15 Bates numbers that you cited in Exhibit A
16 were not Allergan or Actavis marketing
17 materials at all but rather were for an
18 unaffiliated company known as Alpharma?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: I did not have
21 any previous knowledge of that.

22 QUESTIONS BY MR. STAMPFL:

23 Q. Have you ever heard of
24 Alpharma?

25 A. Not prior to this -- reviewing

1 these documents.

2 Q. So were you aware that an
3 entity that at the time had Actavis in its
4 name acquired Kadian from Alpharma in
5 December 2008?

6 A. Sorry, could you repeat that,
7 please?

8 Q. Did you know that Actavis or an
9 affiliate entity acquired Kadian from
10 Alpharma in December 2008?

11 A. I was not aware of those --
12 that transaction at that date.

13 Q. Would you agree that you have
14 no basis to hold Actavis or Allergan
15 responsible for anything that an unaffiliated
16 entity did?

17 MR. LOESER: Objection to form.
18 Calls for a legal conclusion, among
19 other problems, and is outside the
20 scope of his report.

21 THE WITNESS: I'm unaware of
22 the relationship of Alpharma with
23 Actavis or Allergan.

24 QUESTIONS BY MR. STAMPFL:

25 Q. So you didn't take any steps to

1 investigate the relationship between those
2 two entities, correct?

3 A. With the preparation of the
4 report, I did not take any steps to clarify,
5 given that I was unaware that there -- those
6 entities were not connected.

7 MR. STAMPFL: Okay. I will
8 pass the witness. Thank you, sir.

9 THE WITNESS: Okay. Thank you.

10 VIDEOGRAPHER: We are now going
11 off the record, and the time is
12 5:08 p.m.

13 (Off the record at 5:08 p.m.)

14 VIDEOGRAPHER: We are now going
15 back on the record, and the time is
16 5:14 p.m.

17 CROSS-EXAMINATION

18 QUESTIONS BY MR. DAVISON:

19 Q. Dr. Schumacher, my name is
20 William Davison, and I represent Mallinckrodt
21 in this matter.

22 Are you familiar with
23 Mallinckrodt?

24 A. I'm familiar that it's a
25 pharmaceutical company.

1 Q. And are you offering an opinion
2 regarding the truthfulness and accuracy of
3 Mallinckrodt promotional materials regarding
4 its opioid products in this case?

5 MR. LOESER: Objection. Form.

6 THE WITNESS: I believe I've
7 included some examples of materials,
8 you know, through sales training
9 materials, for example, as well as --
10 thank you. I just want to be
11 accurate.

12 QUESTIONS BY MR. DAVISON:

13 Q. Well, if you've included
14 examples, my question is a little bit
15 different.

16 Are you offering an opinion on
17 the truthfulness and accuracy of those
18 materials in this litigation?

19 A. Is the question of whether I'm
20 attempting to validate that they're accurate?

21 Q. Yeah, I'm --

22 A. They're inaccurate -- like what
23 I read is actually what happened? Is that
24 the question?

25 Q. No.

1 I'm asking whether you think
2 the materials that you cite -- in other
3 words, are you claiming in this litigation
4 that Mallinckrodt promoted its products using
5 false statements?

6 A. I believe that Mallinckrodt,
7 amongst other pharmaceutical companies,
8 misstated certain information in the
9 promotion or the training for the promotion
10 of their products, and I've included some
11 examples of that.

12 Q. So your opinion in this matter
13 is that Mallinckrodt misstated certain
14 information in the promotion of its opioid
15 products; is that correct?

16 A. That's correct.

17 Q. And that is based on the
18 Mallinckrodt materials that are cited in your
19 report, correct?

20 A. That is correct.

21 Q. Okay. And in looking at the
22 materials in your report, if you turn to
23 Exhibit A of your report?

24 A. Yes.

25 Q. If you go to 1.19?

1 A. Yes.

2 Q. Is that one of the Mallinckrodt
3 documents that you relied upon to reach your
4 opinion in this matter?

5 A. One of the important
6 Mallinckrodt documents to reach that --

7 Q. And, sir, this document, you
8 state here, is training for sales
9 representatives, correct?

10 A. Just a minute. Let me just
11 make I've got all of this organized for
12 myself here.

13 Q. So, sir, I'm asking you about
14 1.19 of Exhibit A of your report.

15 A. Right. So let's -- we can
16 start with that.

17 Q. And it states there that it's a
18 training for sales representatives, correct?

19 A. That's correct.

20 Q. Do you have any reason to
21 believe that that document was ever shown to
22 a physician?

23 A. I have no evidence that it's
24 been shown to a physician.

25 I understood that the material

1 was -- the educational materials brought --
2 sorry, passed along or provided to the sales
3 representatives.

4 Q. Okay. And did you review that
5 entire document?

6 A. I reviewed a lot of documents.
7 I can't recall this particular phrase out of
8 a larger document. It's likely, but I can't
9 recall.

10 Q. And, sir, I'd like to turn your
11 attention to 1.35 of Exhibit A.

12 Are you there?

13 A. Yes, I am. 1.35, yes.

14 Q. And again, this says, "Training
15 bulletin, number 21."

16 Is that correct?

17 A. That's correct, that's what I
18 have in front of me.

19 Q. Do you have any reason to
20 believe that the information in this document
21 was ever shown to a physician?

22 MR. LOESER: You mean a
23 treating physician or --

24 MR. DAVISON: A physician.

25 MR. LOESER: At Mallinckrodt or

1 not at Mallinckrodt?

2 MR. DAVISON: You can object,
3 if you want.

4 MR. LOESER: All right. I
5 object. Form. The question is
6 confusing.

7 THE WITNESS: I have no
8 evidence that this was shown to a
9 physician or a prescribing physician.

10 QUESTIONS BY MR. DAVISON:

11 Q. If I can turn your attention to
12 Exhibit B of your report. And if you look at
13 number 20 on Exhibit B.

14 A. Yes, I have it in front of me.

15 Q. Is this another Mallinckrodt
16 document that you reviewed?

17 A. My interpretation with MNK was
18 that it would be Mallinckrodt.

19 Q. Okay. So looking at this
20 document, it says, "E-mail re: sales message
21 for Exalgo," and then it has a quote from the
22 document.

23 Is that accurate?

24 A. That's correct, that's what I
25 see.

1 Q. Is there anything in that quote
2 that relates to the potential for abuse of
3 opioid products?

4 A. If you just give me a minute,
5 I'll have a look at it. Thank you.

6 Sorry, what was your question
7 one more time, please?

8 Q. Is there anything in that
9 e-mail that discusses the potential for abuse
10 for opioids?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: I do not see
13 anything -- any content that
14 specifically discusses abuse or risk
15 of abuse.

16 QUESTIONS BY MR. DAVISON:

17 Q. And you testified earlier, sir,
18 that every document that you reviewed in
19 preparation for your report you've included
20 in either the exhibits, the materials relied
21 upon or the supplemental document --
22 supplemental material relied upon that were
23 provided to us; is that correct?

24 MR. LOESER: And the
25 references.

1 MR. DAVISON: Yeah, sorry, the
2 materials -- I think I said materials.
3 If I did not, I meant to include that.

4 THE WITNESS: So the question
5 is, does this constitute a list of the
6 reviewed materials that went into the
7 report?

8 MR. DAVISON: Yes, that's the
9 question, sir.

10 THE WITNESS: That's correct.

11 QUESTIONS BY MR. DAVISON:

12 Q. Okay. So it's fair to say that
13 for your opinion regarding Mallinckrodt's
14 marketing, if these are the only three
15 documents that are included in your list, it
16 is based solely on those three documents; is
17 that accurate?

18 MR. LOESER: Objection.
19 Mischaracterizes his testimony.

20 THE WITNESS: In addition,
21 the -- sorry, one more time with the
22 question, please? Thank you.

23 QUESTIONS BY MR. DAVISON:

24 Q. So if these are the only three
25 documents -- excuse me. Strike that.

1 If these are the only three
2 Mallinckrodt documents listed in your report,
3 it's fair to say that your expert opinion on
4 the truthfulness of Mallinckrodt's marketing
5 is based solely on those three documents?

6 MR. LOESER: Objection.
7 Mischaracterizes his testimony.

8 THE WITNESS: Based on what I
9 have reviewed in terms of the
10 materials provided for the composition
11 of this report, I'm only aware of
12 those documents we just discussed.

13 QUESTIONS BY MR. DAVISON:

14 Q. All right. And two of the
15 documents that we just discussed were
16 internal training documents, correct?

17 A. These examples, that's right.

18 Q. But as we stated -- you say
19 examples -- this is the totality of the
20 documents you reviewed for your report?

21 MR. LOESER: Objection.
22 Mischaracterizes his testimony.

23 THE WITNESS: In terms of what
24 I was -- the resources I was able to
25 review and include in this preparation

1 of the report as shown here, again, is
2 limited to these -- or includes these
3 three documents -- sorry, these three
4 training statements from Mallinckrodt.

5 QUESTIONS BY MR. DAVISON:

6 Q. So your opinion regarding the
7 truthfulness of Mallinckrodt's marketing to
8 physicians is based solely on internal
9 training documents; is that correct?

10 MR. LOESER: Objection.

11 Mischaracterizes his testimony.

12 THE WITNESS: Based on those
13 examples of -- that part of my
14 opinion -- my opinion is based on the
15 various examples that were pulled from
16 a larger body of examples to -- strike
17 that.

18 These three examples constitute
19 my review of -- for the report of
20 training materials for Mallinckrodt,
21 and I'm not aware within these
22 materials that other Mallinckrodt
23 examples exist.

24 QUESTIONS BY MR. DAVISON:

25 Q. And so if you were to provide

1 an expert opinion in this litigation that
2 Mallinckrodt made false or misleading
3 statements to physicians regarding opioids,
4 that would be based solely on the review of
5 three documents that were internal training
6 documents; is that right?

7 MR. LOESER: Objection.

8 Mischaracterizes his testimony.

9 THE WITNESS: These three
10 documents are -- represent the
11 information that I had to review and
12 support my argument.

13 QUESTIONS BY MR. DAVISON:

14 Q. And did you ever consider
15 asking counsel for additional documents to
16 support your statements?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: I did not ask
19 counsel for additional resources
20 within Mallinckrodt.

21 QUESTIONS BY MR. DAVISON:

22 Q. And within your field, do you
23 think it's sufficient to base an opinion on
24 just three documents?

25 MR. LOESER: Objection. Form.

1 Lacks foundation.

2 THE WITNESS: If additional
3 examples exist in the review, I can't
4 recall.

5 QUESTIONS BY MR. DAVISON:

6 Q. But they would be in the report
7 and the exhibits we talked about, correct?

8 A. That's correct.

9 Q. Okay. After talking through
10 those three documents, do you think that is
11 sufficient for you to make a determination as
12 to whether Mallinckrodt's marketing
13 statements to physicians were false or
14 misleading?

15 MR. LOESER: Objection. Form.

16 THE WITNESS: Well, I am
17 concerned that with those examples
18 representing what the intent of the
19 training for their product, I would be
20 concerned there would be additional
21 such examples. And even in the face
22 of two or three of these examples for
23 me, it sends up a red flag that there
24 would be other representations. That
25 would be my opinion.

1 QUESTIONS BY MR. DAVISON:

2 Q. Sir, would it have been helpful
3 for you to actually review what Mallinckrodt
4 said to physicians when it was marketing its
5 products?

6 MR. LOESER: Objection. Form.
7 Calls for speculation.

8 THE WITNESS: I believe the --
9 that reviewing all of the available
10 materials that apply to Mallinckrodt
11 in this instance was beyond the scope
12 of the time available for me to
13 prepare this report, and as such, I
14 attempted to obtain from the materials
15 provided by counsel some examples that
16 seemed to me to represent
17 misstatements or exaggerations.

18 QUESTIONS BY MR. DAVISON:

19 Q. So is it fair to say that what
20 Mallinckrodt actually said to physicians in
21 its detailing is outside the scope of your
22 report?

23 MR. LOESER: Object to the form
24 of the question. I also object to the
25 notion that there are call notes from

1 Mallinckrodt that he was able to
2 review or --

3 MR. DAVISON: You can limit
4 your objection to objection to form.
5 That's the appropriate objection in
6 this case.

7 MR. LOESER: Object to the
8 form. I think the question is
9 confusing, misleading and assumes
10 facts not in evidence.

11 THE WITNESS: So understanding
12 the -- well, strike that.

13 I was unaware of the existence
14 of call notes by Mallinckrodt to
15 review. I can't recall having
16 reviewed any specific example that I
17 could provide, nor did I include that
18 in this report, dossier.

19 QUESTIONS BY MR. DAVISON:

20 Q. So is it fair to say that what
21 Mallinckrodt actually said to physicians
22 through either call notes or through
23 detailing sale aid is outside the scope of
24 your report?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: I have no
2 evidence either way, and based on
3 that, I put it outside the scope of my
4 report.

5 MR. DAVISON: Okay. Thank you.
6 I have nothing further.

7 VIDEOGRAPHER: We are now going
8 off the record, and the time is
9 5:31 p.m.

10 (Off the record at 5:31 p.m.)

11 VIDEOGRAPHER: We are now going
12 back on the record, and the time is
13 5:4 -- 34 p.m.

14 MR. LOESER: Actually, I'd just
15 take a quick minute to note two
16 corrections or objections for the
17 record.

18 The first is that Allergan's
19 counsel referred to six documents,
20 some of which he described as and
21 characterized as not relating to
22 chronic pain. And I would just note
23 our objection to the
24 mischaracterization of those
25 documents. The witness was not shown

1 the documents; however, the documents
2 are not as described by counsel.

3 Second, I would object to
4 Mallinckrodt's counsel referring to
5 call notes and suggesting or implying
6 to the witness that such notes exist.
7 We are not aware of any call notes
8 produced by Mallinckrodt, however; if
9 they exist, we'd ask that they be
10 produced immediately.

11 MR. STAMPFL: And I'd like to
12 make a statement in response to that
13 belated objection, which is that I
14 disagree that there were any
15 mischaracterizations at all, and if
16 counsel would allow me half an hour or
17 an hour additional time with the
18 witness, I could demonstrate that by
19 going through each of the documents he
20 cites.

21 So will you allow me to do
22 that, Counsel?

23 MR. LOESER: Counsel, your time
24 and what you get is subject to the
25 agreement of your colleagues, so good

1 luck.

2 MR. STAMPFL: Beyond the seven
3 hours. Will you allow me an hour
4 beyond the seven hours?

5 MR. LOESER: No, I will not.

6 MR. STAMPFL: Okay. So we have
7 no opportunity to test the statement
8 that you just put on the record?

9 MR. LOESER: Counsel, you have
10 the opportunity to divide up your time
11 however you see fit, and you chose the
12 way you chose, and that's life. So we
13 should move on.

14 MR. STAMPFL: Well, I object
15 because I don't think there's been
16 enough time to test that statement
17 that you just made, which was
18 inaccurate.

19 MR. LEVINE: All I'll note is
20 that the last three minutes did not
21 count towards this deposition.

22 MR. LOESER: At least a minute
23 and a half of it, anyway.

24 CROSS-EXAMINATION

25

1 QUESTIONS BY MR. LEVINE:

2 Q. Good afternoon, Dr. Schumacher.

3 A. Good afternoon.

4 Q. My name is Aaron Levine, and I
5 represent Endo and Par in this case.

6 One of my co-counsel asked you
7 about a book chapter from 2001.

8 A. That's correct.

9 Q. Do you recall?

10 That was Exhibit 8, which you
11 said was used to educate medical students,
12 correct?

13 A. Principally, yes.

14 Q. Did you contribute to the
15 opioid crisis?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: I believe that
18 all physicians that were misled by
19 promotional and misleading statements
20 by pharmaceuticals may have
21 participated in the overprescribing of
22 high-dose or chronic opioid
23 prescribing for noncancer patients.

24 QUESTIONS BY MR. LEVINE:

25 Q. With respect to the chapter

1 that you wrote, was that based on any
2 statements that you received from
3 pharmaceutical companies, or was that based
4 on independent research?

5 MR. LOESER: Objection. Form.

6 THE WITNESS: Sorry, which
7 statement are you talking about?

8 QUESTIONS BY MR. LEVINE:

9 Q. With respect to the chapter
10 that was discussed as Exhibit 8, your book
11 chapter.

12 A. Are you talking about the
13 entire chapter?

14 Q. Yes.

15 Did you base any of that
16 chapter on any statements that you received
17 from pharmaceutical companies?

18 MR. LOESER: Objection. Form.

19 THE WITNESS: I see. The
20 chapter was based on the literature as
21 it existed at that time.

22 QUESTIONS BY MR. LEVINE:

23 Q. And so once again I ask: Did
24 the information that you conveyed in that
25 chapter contribute to the opioid crisis?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: I'm not aware
3 that -- that that chapter contributed
4 to the opioid crisis.

5 QUESTIONS BY MR. LEVINE:

6 Q. Might have; might not have?

7 MR. LOESER: Objection. Form.
8 Calls for speculation.

9 THE WITNESS: I'm not aware.

10 QUESTIONS BY MR. LEVINE:

11 Q. You're not offering any
12 marketing opinions as to Par Pharmaceuticals,
13 correct?

14 I'll represent to you that
15 there's no mention of Par in your report or
16 in any exhibit.

17 MR. LOESER: Counsel, just an
18 objection as before. The footnote
19 that we keep reading does not refer to
20 subsidiaries or affiliates of the
21 listed defendants.

22 So if you want to clarify the
23 relationship of Par to a listed
24 defendant, you might get a different
25 answer.

1 QUESTIONS BY MR. LEVINE:

2 Q. Par is associated with Endo,
3 but you are not offering any opinions that
4 are specific to Par, correct?

5 A. Frankly, I don't know what the
6 relationship is between Par and Endo to make
7 an opinion in that regards.

8 Q. Okay. You don't cite any
9 marketing materials that reference Par in
10 your report, correct?

11 A. As far as --

12 MR. LOESER: Go ahead.

13 THE WITNESS: As far as my
14 understanding in preparing for this
15 report, I had not associated Par with
16 Endo and recognized Par as a separate
17 entity to identify as marketing
18 materials.

19 QUESTIONS BY MR. LEVINE:

20 Q. Do you know which products Endo
21 markets?

22 A. I'm aware that Endo markets
23 oxymorphone.

24 Q. What is the brand name of those
25 products?

1 A. In terms of brand naming, I
2 tend to use the generic names.

3 Q. So I'm confused.

4 You've said the marketing
5 materials you reviewed have an effect on
6 physicians, correct?

7 A. Uh-huh, that's --

8 Q. But yet in all of your review
9 of the marketing materials, you cannot
10 remember the brand name of the product?

11 MR. LOESER: Objection to form.

12 THE WITNESS: If you give me a
13 moment just to review my materials.

14 QUESTIONS BY MR. LEVINE:

15 Q. Do physicians review their
16 marketing materials before they prescribe?

17 MR. LOESER: Objection. Form.

18 The witness has asked for a
19 moment to review his report in order
20 to answer --

21 MR. LEVINE: There's nothing
22 I've asked that he needs to review.
23 I'm actually not asking about any
24 document.

25 MR. LOESER: But you've asked

1 him if he remembers the drug name --

2 MR. LEVINE: Right.

3 MR. LOESER: -- and the report
4 indicates the drug name, so he's
5 looking --

6 MR. LEVINE: Right. I'll tell
7 him the drug name. I'm not trying to
8 hide it.

9 MR. LOESER: Well, then speed
10 it up and tell him.

11 MR. LEVINE: I'm just asking if
12 he can remember the drug name because
13 he's talking about the effect of
14 marketing materials.

15 MR. LOESER: Okay. Well, tell
16 him the drug name if you want it to go
17 faster.

18 QUESTIONS BY MR. LEVINE:

19 Q. Without looking at your report,
20 you do not remember the drug name of Endo's
21 product, correct?

22 MR. LOESER: Objection. Form.

23 QUESTIONS BY MR. LEVINE:

24 Q. Dr. Schumacher?

25 Dr. Schumacher?

1 A. I'm having sort of a very tired
2 moment at the -- at the moment.

3 MR. LOESER: Do you want to --
4 QUESTIONS BY MR. LEVINE:

5 Q. Do you need a break?

6 A. I do, actually. Do you mind?
7 Sorry about that, yeah.

8 Q. Well, there is one question
9 pending, which is, without looking at your
10 report, you cannot remember the name of
11 Endo's products in this report, correct?

12 A. Right now I feel too fatigued
13 to respond.

14 Q. As fatigued or not, you can't
15 remember the name of the product right now?

16 And we'll continue after --
17 we'll take a break. I just don't want to
18 break with a question pending.

19 A. Again, I can't recall right now
20 because I'm fatigued and --

21 MR. LEVINE: Okay. Let's take
22 a break.

23 VIDEOGRAPHER: Okay. We are
24 now going off the record, and the time
25 is 5:41 p.m.

1 (Off the record at 5:41 p.m.)

2 VIDEOGRAPHER: We are now going
3 back on the record, and the time is
4 5:59 p.m.

5 QUESTIONS BY MR. LEVINE:

6 Q. Hi, Dr. Schumacher.

7 Are you feeling better?

8 A. I am.

9 Q. You're able to continue?

10 A. Yes, I am.

11 Q. Okay. I imagine you probably
12 know the name of the Endo product.

13 A. As soon as I got half of the
14 soda in me...

15 Opana, of course, because it's
16 not on our formulary, and I know that comes
17 up occasionally.

18 Q. Okay. For the record, are you
19 also offering opinions regarding Percocet?

20 A. I believe that within my report
21 there's been discussion of combination of --
22 opioid and acetaminophen combinations, so
23 within the report, those combinations have
24 been mentioned in various aspects of the
25 report.

1 Q. Do you know whether you're
2 offering opinions regarding Percocet?

3 MR. LOESER: Objection. Form.

4 MR. LEVINE: Excuse me, let me
5 rephrase that.

6 THE WITNESS: Yes.

7 QUESTIONS BY MR. LEVINE:

8 Q. Do you know whether you're
9 offering opinions regarding the marketing of
10 Percocet?

11 MR. LOESER: Objection. Form.

12 THE WITNESS: I'm not aware
13 that -- I'll say this: The focus of
14 my review of the materials was not
15 focused on Percocet.

16 QUESTIONS BY MR. LEVINE:

17 Q. Okay. You testified earlier,
18 and correct me if I misstate this, that
19 you're relying on statements and call notes
20 that show that sales representatives have
21 gotten assurances that they would now -- that
22 doctors would now write prescriptions for
23 higher doses; is that correct?

24 MR. LOESER: Objection to form.
25 Mischaracterizes his testimony.

1 THE WITNESS: My testimony is
2 upon review of call notes from sales
3 representatives, I had great concern,
4 based on review of a few of those
5 examples, that -- that they were
6 influencing the decision of
7 prescribers based on statements that
8 were not supported by the scientific
9 literature.

10 QUESTIONS BY MR. LEVINE:

11 Q. You can't cite any Endo call
12 notes in -- let's start with Summit or
13 Cuyahoga County -- indicating that any doctor
14 changed his or her prescribing in any way due
15 to detailing or marketing, can you?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: In my -- as I
18 recall in my previous testimony, I did
19 not have examples of call notes that
20 came from -- that was identified as
21 other than Ohio, and I don't believe I
22 have any details that was related to a
23 county.

24 QUESTIONS BY MR. LEVINE:

25 Q. You can't cite any Endo call

1 notes in the United States that indicate that
2 any doctor changed his or her prescribing
3 habits in any way due to detailing or
4 marketing, can you?

5 MR. LOESER: Objection to form.

6 THE WITNESS: I do not have
7 documentation that links a particular
8 call note to a particular
9 prescriber -- prescribing event for an
10 opioid.

11 QUESTIONS BY MR. LEVINE:

12 Q. And that's for any opioid, Endo
13 or not?

14 A. Well, specifically you asked
15 about Endo.

16 Q. Okay. I was just clarifying
17 based on your answer.

18 Is your answer specific to Endo
19 or all defendants?

20 A. That was your question, and so
21 I'll answer it specific to Endo.

22 Q. Would the same be true for all
23 defendants?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: Could you restate

1 the question, please?

2 QUESTIONS BY MR. LEVINE:

3 Q. Sure.

4 Can you cite any call notes in
5 the United States indicating that any doctor
6 changed his or her prescribing in any way due
7 to detailing or marketing?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: Again, the
10 relationship of those call notes in
11 forming my opinion, the promotional
12 efforts and the misstatements by call
13 representatives as documented in those
14 notes, supported the notion, the
15 thesis, that aggressive marketing of
16 opiates for chronic noncancer pain
17 resulted in the overprescribing of
18 opiates throughout the United States
19 and the opioid epidemic; however, I
20 don't have a link that -- one to one
21 that relates a particular call note
22 for a particular physician to a change
23 in their prescribing practice.

24 QUESTIONS BY MR. LEVINE:

25 Q. Okay. You can't say the opioid

1 crisis in Summit and Cuyahoga Counties would
2 look any different if Endo did not market and
3 sell opioids, could you?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: That's beyond the
6 scope of my report. I did not
7 specifically look at an individual --
8 well, that's beyond the scope of my
9 report.

10 QUESTIONS BY MR. LEVINE:

11 Q. The scope of your report does
12 attribute what's driving the opioid crisis,
13 correct?

14 A. That's correct.

15 Q. So you cannot say that the
16 opioid crisis would look any different --
17 again, now, let's make it broader -- in the
18 United States if Endo did not market or sell
19 opioids?

20 MR. LOESER: Objection. Form.

21 Calls for speculation about a universe
22 that doesn't exist.

23 THE WITNESS: Based on my
24 review of a number of opioid
25 manufacturers, the promotion of

1 opioids in the treatment of chronic
2 noncancer pain where there's no strong
3 literature that supports its use in
4 things like back pain, centralized
5 pain syndromes or headache, in my
6 opinion, underpin the driving force of
7 the opioid epidemic.

8 QUESTIONS BY MR. LEVINE:

9 Q. So let me be more specific.
10 Can you say that any patient
11 who was prescribed an Endo product would not
12 have otherwise been prescribed a different
13 opioid had Endo not marketed and sold their
14 products?

15 MR. LOESER: Objection. Form.
16 Calls for speculation.

17 THE WITNESS: I don't know.

18 QUESTIONS BY MR. LEVINE:

19 Q. Have you ever been detailed by
20 any Endo sales representative or marketing
21 person?

22 A. I can't recall.

23 Q. Do you recall ever telling any
24 Endo sales representative or marketing person
25 whether their marketing was too aggressive,

1 improper or misleading?

2 A. I don't recall ever doing that.

3 Q. You never told anyone at Endo
4 that their promotion of opioids was improper,
5 did you?

6 MR. LOESER: Objection. Form.

7 THE WITNESS: I don't recall
8 doing that.

9 QUESTIONS BY MR. LEVINE:

10 Q. Did you ever tell your
11 colleagues at UCSF that Endo's marketing was
12 improper?

13 MR. LOESER: Objection. Form.
14 Outside the scope of his report.

15 THE WITNESS: I don't recall.

16 QUESTIONS BY MR. LEVINE:

17 Q. Did you ever present at a
18 medical conference to tell your colleagues
19 that they were being misled by Endo's
20 marketing?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: No, I don't
23 recall ever doing that.

24 QUESTIONS BY MR. LEVINE:

25 Q. Ever present at a medical

1 conference to tell your colleagues that they
2 were being misled by other people's
3 marketing?

4 A. I have made presentations that
5 have been based on the work of the NASEM
6 report that -- which the key thesis or the
7 key cause, conclusion, was the aggressive
8 promotion of opiates for noncancer chronic
9 pain. And within presentations, I have made
10 that reference to our study's conclusion.

11 Q. Have you ever prescribed Opana
12 or Opana ER?

13 A. No, I have not. It's not
14 within our formulary at UCSF.

15 Q. Have you ever prescribed
16 Percocet?

17 A. As part of our consult service,
18 we have prescribed Percocet to patients,
19 that's correct.

20 Q. Do you continue to prescribe
21 Percocet?

22 A. Based on the patient's history.
23 Often patients may come in with a history of
24 already taking Percocets, and depending on
25 the clinical situation, we -- and discussions

1 with them, we may continue that medication.
2 So we would either give a recommendation or
3 if the prescribing pattern is under our
4 control, we would write for that
5 prescription.

6 Q. Have you ever prescribed
7 Percocet based on marketing?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: The decision to
10 prescribe Percocet has been -- within
11 the inpatient services has typically
12 been driven by a patient's particular
13 history of analgesic use and in
14 certain circumstances their ability to
15 tolerate different opioids, including
16 Percocet.

17 QUESTIONS BY MR. LEVINE:

18 Q. Sorry, I don't believe you
19 answered my question.

20 A. I'm sorry, could you repeat
21 that?

22 Q. Have you ever prescribed
23 Percocet based on marketing?

24 MR. LOESER: Objection. Asked
25 and answered.

1 THE WITNESS: I have not based
2 a decision to use Percocet based on
3 marketing materials that I'm aware of.

4 QUESTIONS BY MR. LEVINE:

5 Q. What methodology did you use to
6 determine that Endo's marketing influenced
7 the way opioids were prescribed?

8 MR. LOESER: Objection. Form.

9 THE WITNESS: Well, principally
10 I was given the records as described
11 throughout this testimony of either
12 training materials or call notes or
13 internal documents, and upon those --
14 with review, I have included some
15 examples within my report. And it is
16 on that basis that I've included those
17 in my opinion.

18 QUESTIONS BY MR. LEVINE:

19 Q. So you've reviewed a document
20 and concluded that it influenced the way that
21 opioids were prescribed.

22 Is there any method in between
23 your review of the document and your
24 conclusion that I'm unaware of?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: My opinion was
2 formed by the review of the documents
3 provided and -- yeah.

4 QUESTIONS BY MR. LEVINE:

5 Q. No other method?

6 A. Relative to the review of the
7 literature, there's been a relationship of
8 how, again, the influence of -- strike that.

9 I'll just stop there. No other
10 influence.

11 Q. No other influence -- you mean
12 no other method, right?

13 A. No other method beyond the
14 review of the literature that is -- went into
15 the report development and also the materials
16 that were provided for review.

17 That said, I am understanding
18 that this is largely providing examples, and
19 there will be other expert testimony that
20 will focus on -- specifically around
21 marketing.

22 Q. Do you know if any of the
23 marketing materials you reviewed were used in
24 Summit or Cuyahoga Counties?

25 A. Specifically, I do not have

1 documents that would tie those materials to
2 those counties.

3 Q. Do you know if any of the
4 physicians -- if any physicians were
5 influenced to prescribe -- strike that.

6 Do you know if any physicians
7 were influenced to prescribe Endo's opioids
8 based on their marketing?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: Sorry, did you
11 say any physicians? Where? Could you
12 repeat that?

13 QUESTIONS BY MR. LEVINE:

14 Q. Do you know if any physicians
15 were influenced to prescribed Endo's opioids
16 based on their marketing?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: My review of the
19 materials grew from the idea that
20 aggressive marketing in a number of
21 aspects of detailing and -- could be
22 generalized to influence physician
23 decision-making, and to that extent, I
24 do not have a specific link of a
25 particular physician to a particular

1 Endo marketing.

2 QUESTIONS BY MR. LEVINE:

3 Q. So the answer to my question
4 is, no, you do not know if any physicians
5 were influenced to prescribe Endo's opioids
6 based on their marketing?

7 MR. LOESER: Objection.

8 QUESTIONS BY MR. LEVINE:

9 Q. Correct?

10 MR. LOESER: Asked and
11 answered.

12 THE WITNESS: Beyond the
13 example I gave in terms of a general
14 effect of marketing of opioids for
15 chronic noncancer pain when there's
16 limited or no scientific evidence.

17 QUESTIONS BY MR. LEVINE:

18 Q. You don't have any data
19 indicating what percentage of patients taking
20 opioids were exposed to marketing, do you?

21 MR. LOESER: Objection. Form.
22 Outside the scope of the report.

23 THE WITNESS: Within the
24 preparation of the report, I did not
25 focus on evaluating that -- any

1 specific relationship or, I should
2 say, percentage of marketing materials
3 to patients. I don't know.

4 QUESTIONS BY MR. LEVINE:

5 Q. So I'm going to -- I'm trying
6 to move through this as quickly as I can to
7 allow my colleague to have time.

8 A. Sure. Sure.

9 Q. You cite on -- in Exhibit B of
10 your report, you cite two sales training
11 reports in paragraphs 16 and 17.

12 A. Okay.

13 Q. Now, this section of your
14 report refers to efforts to trivialize
15 addiction.

16 At the beginning of Exhibit B,
17 you say these are examples of efforts to
18 trivialize addiction, correct?

19 A. That's correct, yes.

20 Q. Okay. You don't cite any
21 statements in these -- from these documents
22 that trivialize addiction, do you?

23 MR. LOESER: Objection. Form.

24 THE WITNESS: If you can just
25 give me a moment, I'll review these

1 two quick statements. Thank you.

2 Well, again, going back to the
3 beginning of Exhibit B, examples,
4 notes reflecting efforts to trivialize
5 the risk of addiction and exaggerate
6 the benefits of chronic opioid use.

7 QUESTIONS BY MR. LEVINE:

8 Q. Do you cite any examples of
9 exaggerating the benefits there either?

10 MR. LOESER: And I'll note for
11 the record there are other examples
12 that cover those topics.

13 MR. LEVINE: Right, but
14 these --

15 MR. LOESER: Not in this
16 section. I'm not saying in general.

17 MR. LEVINE: First of all, you
18 don't need to note anything for the
19 record. I'm asking about these two
20 examples.

21 MR. LOESER: Right. But to the
22 extent you're suggesting these are the
23 only --

24 MR. LEVINE: Please don't abuse
25 my time.

1 MR. LOESER: -- Endo examples.

2 There are other --

3 MR. LEVINE: I'm not suggesting
4 anything of the sort.

5 MR. LOESER: Okay. Well, then
6 we've clarified that.

7 THE WITNESS: Well, again,
8 reading number 17, "I'd like you to
9 turn up the passion some with Opana,"
10 "staying ahead of the pain," "being
11 released from the grip of pain," are
12 tag lines that stand out and should be
13 used along -- these type of
14 statements, again, trying to
15 understand, again, the context in
16 which these were made is limiting.

17 So I would agree that there's
18 no specific inference that these
19 agents -- I would say this, that the
20 focus is on the success of pain
21 control with Opana, without any
22 mention of potential harms or risks to
23 addiction. I think that's --

24 QUESTIONS BY MR. LEVINE:

25 Q. Sorry, just to be clear --

1 A. Yes.

2 Q. -- you think these documents
3 don't mention potential harms or risks?

4 A. I'm talking about these two
5 points, 16 and 17.

6 Q. Right.

7 You think those documents don't
8 mention -- the documents you're referencing
9 there don't mention potential harms or risks?

10 MR. LOESER: Objection. And
11 asked and answered.

12 QUESTIONS BY MR. LEVINE:

13 Q. Or is it just the statement you
14 pull out of the document that doesn't mention
15 it?

16 A. It's just the statement I'm
17 referring to.

18 Q. Okay. Do you agree that the
19 majority of opioid analgesics are thought to
20 drive -- strike that.

21 Do you agree that the majority
22 of opioid analgesics that are thought to
23 drive the catastrophic figures regarding
24 increased deaths and opioid-induced side
25 effects overwhelmingly comes from

1 prescription painkillers shared by friend or
2 relative for free and often prescribed
3 originally for postoperative pain?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: Based on evidence
6 that I reviewed, as well as evidence,
7 frankly, that has been stated by the
8 CDC, I believe patients that are using
9 now illicit forms of opioids resulting
10 in increasing opioid-related deaths
11 had their initial -- the initiated
12 exposure to opioids were through
13 prescription opioids.

14 And in particular, the sources
15 of those opioids, as I understand it,
16 have come from a wide range of
17 indications.

18 I do agree that in addition to
19 the trajectory of the opioid epidemic,
20 there's been a shift from patients
21 that are having overdose or harm from
22 the primary prescribed opioids to then
23 transitioning to other opioids that
24 resulted in their death.
25

1 QUESTIONS BY MR. LEVINE:

2 Q. So yes or no, do you disagree
3 with my -- with the statement I asked you
4 about?

5 MR. LOESER: Objection. Form,
6 and asked and answered.

7 THE WITNESS: The --

8 MR. LEVINE: I'll withdraw it.
9 I'm running out of time.

10 THE WITNESS: Okay.

11 QUESTIONS BY MR. LEVINE:

12 Q. So in Exhibit A on paragraph --
13 in paragraph 134 of your report, you cite a
14 Revopan --

15 MR. LOESER: Sorry, Counsel,
16 where are you?

17 MR. LEVINE: Exhibit A,
18 paragraph 1.34 of the report. Sorry.

19 THE WITNESS: 1.34?

20 QUESTIONS BY MR. LEVINE:

21 Q. Yeah, page 8 of the exhibit.

22 A. 1.3 --

23 MR. LOESER: 1.34 on A.

24 THE WITNESS: Sorry.

25 MR. LOESER: Is that B?

1 THE WITNESS: This is -- I
2 thought we were on -- this is
3 Exhibit A.

4 QUESTIONS BY MR. LEVINE:

5 Q. Yeah, 1.34.

6 A. Oh, it's back here. Sorry.

7 Q. Do you see that?

8 A. Yes, I'm there.

9 Q. You cite a Revopan scientific
10 training module?

11 A. Yes.

12 Q. Do you know what Revopan is?

13 A. I can't recall.

14 Q. Do you know whether any drug
15 was ever marketed as Revopan?

16 A. I can't recall.

17 Q. Is this document a draft or a
18 final?

19 It says it in your report, it's
20 a draft.

21 Do you see that?

22 A. Draft, yes, I see that.

23 Q. Okay. Did you ask to see the
24 final?

25 A. No, I did not.

1 Q. You don't have any reason to
2 think this document was ever used based on
3 the fact that it's a draft and not a final,
4 correct?

5 MR. LOESER: Objection. Form.
6 Calls for speculation.

7 THE WITNESS: I have no
8 evidence either way whether it was
9 made into a final form.

10 MR. LEVINE: Okay. I think I'm
11 out of --

12 MR. TAM: Go ahead.

13 QUESTIONS BY MR. LEVINE:

14 Q. Maybe two more questions.
15 You're not saying opioids
16 should be off the market, are you?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: I think opioids
19 are an important part of analgesic
20 care for patients, in particular for
21 acute pain management, cancer pain and
22 end-of-life care and, under very small
23 circumstances, other conditions we
24 discussed previously.

25

1 QUESTIONS BY MR. LEVINE:

2 Q. So you're not saying opioids
3 should be off the market, correct?

4 MR. LOESER: Objection. Asked
5 and answered.

6 THE WITNESS: If you're asking
7 me all opioids should be taken off the
8 market, I believe there's many opioids
9 that are -- provide useful therapeutic
10 options for physicians.

11 MR. LEVINE: Thank you. Let's
12 go off the record.

13 VIDEOGRAPHER: We are now going
14 off the record, and the time is
15 6:23 p.m.

16 (Off the record at 6:23 p.m.)

17 VIDEOGRAPHER: We are now going
18 back on the record, and the time is
19 6:32 p.m.

20 CROSS-EXAMINATION

21 QUESTIONS BY MR. TAM:

22 Q. Dr. Schumacher, my name is
23 Jonathan Tam, and I represent Purdue.

24 Have you ever prescribed
25 OxyContin?

1 A. Within the setting of our
2 consult service in the hospital, yes.

3 Q. When was the last time you
4 prescribed OxyContin?

5 A. Relative to patients that we
6 have managed in terms of the continuation of
7 their care, many patients have come in on
8 OxyContin, so it could have been within a few
9 weeks ago.

10 Q. In your career, how many
11 OxyContin prescriptions have you written?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: I don't know.

14 QUESTIONS BY MR. TAM:

15 Q. Don't have a ballpark?

16 A. I really don't know.

17 Q. And have any of those
18 prescriptions been for chronic pain?

19 MR. LOESER: Objection. Form.

20 THE WITNESS: Again, those
21 prescriptions have included patients
22 that have come into the hospital,
23 typically for chronic or acute on
24 chronic indications, and within the
25 evaluation of those patients, we've

1 deemed, if appropriate, to continue
2 their OxyContin principally out of the
3 fear of opioid withdrawal.

4 QUESTIONS BY MR. TAM:

5 Q. So some of the prescriptions
6 have been for chronic pain, correct?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: Various forms of
9 chronic pain, that's correct.

10 QUESTIONS BY MR. TAM:

11 Q. Have you ever been detailed by
12 a Purdue sales representative about
13 OxyContin?

14 A. I don't recall.

15 Q. Earlier today you mentioned
16 that you had mentors that may have interacted
17 with sales representatives about OxyContin;
18 is that correct?

19 A. That's correct, I did testify
20 to that.

21 Q. What are the names of your
22 mentors?

23 A. At the time it was Warren McKay
24 and Pamela Pierce Palmer. That's what I
25 recall.

1 Q. And are those doctors -- were
2 they practicing in California?

3 A. That's correct.

4 Q. Did they ever practice in Ohio?

5 A. Not that I'm aware of.

6 Q. Have you conducted any research
7 or analysis to determine how many
8 prescriptions -- strike that.

9 In your report, you say that
10 Purdue's marketing drove the prescription of
11 OxyContin at higher doses; is that correct?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: That's correct, I
14 did that -- include that in the
15 report.

16 QUESTIONS BY MR. TAM:

17 Q. Have you conducted any research
18 or analysis to determine how many
19 prescriptions of OxyContin were written at
20 higher doses because of Purdue's marketing?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: That was beyond
23 the scope of my preparation of the
24 report.

25

1 QUESTIONS BY MR. TAM:

2 Q. So that's not --

3 A. I have not prepared such a
4 report myself.

5 Q. So that's not something you can
6 quantify, can you?

7 A. I'm unclear whether you can
8 quantify it or not, but given the materials I
9 had, I was unable -- I did not quantify it
10 for this report.

11 Q. Have you conducted any research
12 or analysis to determine how many
13 prescriptions of OxyContin were written for a
14 longer duration because of Purdue's
15 marketing?

16 A. I have not conducted any
17 studies that would attempt to answer that
18 question.

19 Q. So that's not something you can
20 quantify, can you?

21 MR. LOESER: Objection. Form.
22 Mischaracterizes his testimony.

23 THE WITNESS: I know that there
24 will be expert testimony by other
25 experts focused on marketing. It's

1 possible they have the methodology and
2 means to make such a determination,
3 but that was outside the scope for my
4 report --

5 QUESTIONS BY MR. TAM:

6 Q. I apologize.

7 A. No, that was it.

8 Q. Have you conducted any research
9 or analysis to determine how many
10 prescriptions of OxyContin were written for
11 any particular condition because of Purdue's
12 marketing?

13 MR. LOESER: Objection. Form.

14 THE WITNESS: I have not
15 performed any study or calculation to
16 make that relationship.

17 QUESTIONS BY MR. TAM:

18 Q. And no research or analysis on
19 that, correct?

20 MR. LOESER: Objection to form.

21 THE WITNESS: The extent of my
22 research was the review of the
23 literature that linked aggressive
24 marketing to increased prescribing. I
25 think that's summarized by Van Zee in

1 my report and references.

2 QUESTIONS BY MR. TAM:

3 Q. But you can't quantify the
4 increase in OxyContin prescriptions that were
5 written because of Purdue's marketing, can
6 you?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: Again, I --
9 that's -- the quantification of that
10 difference was beyond the scope of my
11 preparation for this report.

12 QUESTIONS BY MR. TAM:

13 Q. So it's not something you did
14 in preparing your opinions, correct?

15 A. Again, I relied on review of
16 the materials given to me as well as the
17 referenced literature in which to help
18 support my opinion, as well as the evidence
19 that in my practice that patients on
20 chronic -- advancing doses of opioids were
21 doing little for their chronic noncancer pain
22 problems.

23 MR. TAM: Doctor, I know it's
24 been a long day, but I'm going to move
25 to strike that as nonresponsive. But

1 I'll go ahead and move on.

2 QUESTIONS BY MR. TAM:

3 Q. If you turn to Exhibit B in
4 your report, this is where you cite to the
5 Purdue call notes that you discuss in your
6 report, right?

7 A. That's correct.

8 Q. And you cite to, it looks like,
9 15 call notes from Purdue?

10 A. That looks correct, yes. Thank
11 you.

12 Q. Did you have access to all the
13 call notes that Purdue produced in this
14 litigation?

15 MR. LOESER: Objection. Calls
16 for speculation.

17 THE WITNESS: I am uncertain
18 that I had access to all the -- I
19 don't know either way.

20 QUESTIONS BY MR. TAM:

21 Q. How many Purdue call notes were
22 you provided with?

23 A. Based on review, there appear
24 to be hundreds, if not thousands, of call
25 notes. And I -- based on the time available,

1 I did my best to grab a few as -- basically
2 as examples to support my report.

3 Q. Sir, you were provided a subset
4 of the Purdue call notes; is that fair?

5 MR. LOESER: Objection. Calls
6 for speculation.

7 THE WITNESS: Again, I don't
8 know what the representative sample,
9 in fact, was. I just was provided
10 hundreds, if not thousands, of call
11 notes.

12 QUESTIONS BY MR. TAM:

13 Q. Did you review all of the
14 hundreds or thousands of call notes that were
15 provided to you?

16 A. I reviewed samples of those
17 call notes.

18 Q. Was it -- sorry, go ahead.

19 A. In one case, since these were
20 on an Excel spreadsheet, I searched just a
21 term of "OxyContin," for example, and then
22 every tenth one I would have a look at. So I
23 had to have some methodology to try to
24 generate an overview of what the call notes
25 looked like.

1 Q. Would you be surprised to learn
2 that there were over 400,000 call notes
3 produced by Purdue?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: That's a lot of
6 call notes.

7 Was I surprised? I don't know,
8 but...

9 QUESTIONS BY MR. TAM:

10 Q. When you say you received call
11 notes in the thousands, can you ballpark that
12 better?

13 MR. LOESER: Objection.

14 Mischaracterizes his testimony.

15 THE WITNESS: I did not
16 quantitate the total number of call
17 notes. Again, it was in the
18 thousands.

19 QUESTIONS BY MR. TAM:

20 Q. Like 10,000? Hundred thousand?

21 A. I think that it was -- again,
22 if I -- thinking about -- in my process in
23 looking to the left column, I believe it
24 exceeded 10,000, so it -- at least it was in
25 the hundred thousands, but I don't know

1 precisely how many were there.

2 Q. What time period did those --
3 strike that. Let me ask that.

4 For the Purdue call notes that
5 you reviewed, what time period did they
6 cover?

7 MR. LOESER: What time period
8 did the calls occur? That's what
9 you're asking?

10 THE WITNESS: Well, within the
11 examples here, they represent
12 somewhere between '97 and 2000, is
13 what I recall, but I would have to go
14 back through all my examples to see if
15 that --

16 QUESTIONS BY MR. TAM:

17 Q. Okay. So in fairness to you,
18 Doctor, there is a call note from 2001, but
19 all the call notes that you cite for Purdue
20 are from 2001 and earlier; is that correct?

21 A. For the sake of time, if that's
22 what you've identified, but let me just
23 quickly look here real quick.

24 In 2001 you said; is that
25 correct?

1 Q. Yes.

2 A. That appears correct, yes.

3 Q. Doctor, how many hours did you
4 spend preparing your report in this case?

5 A. I can't -- I haven't actually
6 considered tallying up all those hours.

7 Q. You haven't billed your time to
8 plaintiffs' counsel?

9 A. I have been, but I -- I'm not
10 sure I have an accurate tally, to be honest
11 with you.

12 Q. What's your best estimate as to
13 the number of hours you've billed -- or let
14 me ask that again.

15 What's your best estimate as to
16 the amount of hours you've spent on your
17 report?

18 MR. LOESER: Don't guess, if
19 you don't know.

20 THE WITNESS: I don't know.

21 QUESTIONS BY MR. TAM:

22 Q. Have you submitted bills to
23 plaintiffs' counsel?

24 A. Yes, that's correct.

25 Q. How many bills have you

1 submitted?

2 A. Two.

3 Q. When did you start working on
4 your report?

5 A. Somewhere mid or late February.

6 Q. And when did you finish your
7 report?

8 A. March 25th.

9 Q. And when you say you started in
10 mid-February, you're talking about
11 February 2019?

12 A. That's correct.

13 Q. Doctor, for the Purdue call
14 notes that you cite, some of these are from
15 outside of Ohio; is that fair?

16 A. There's -- I see one.
17 Number 10 is Kentucky. Number 11's Kentucky.
18 It looks like the bulk of them are from Ohio.

19 Q. Number 8 is from West Virginia?

20 A. You're right, yes, that's
21 correct.

22 Q. And for the Ohio call notes,
23 you didn't determine whether any of these
24 call notes are from either Cuyahoga County or
25 Summit County?

1 A. That's correct.

2 Q. Would you be surprised to learn
3 that only one of the call notes is from
4 Cuyahoga County?

5 MR. LOESER: Objection. Form.
6 Assumes facts not in evidence.

7 THE WITNESS: That's new
8 information at this setting.

9 QUESTIONS BY MR. TAM:

10 Q. Are you aware that the call
11 notes provide the city for the doctor?

12 A. I'm sorry, could you repeat
13 that?

14 MR. LOESER: Objection. Form.

15 THE WITNESS: I wasn't quite
16 sure I understood that. Sorry.

17 QUESTIONS BY MR. TAM:

18 Q. Are you aware that the call
19 notes identify the city for where the doctor
20 is located?

21 MR. LOESER: Objection. Form.

22 THE WITNESS: I remember
23 reviewing aspects of it, but I was
24 unaware that the call notes had that
25 level of detail.

1 QUESTIONS BY MR. TAM:

2 Q. Did you do any research into
3 the prescribing practices of any of the
4 doctors corresponding to the call notes you
5 cite in your report?

6 A. No, I have not.

7 Q. So it's fair to say you don't
8 know what the patient outcomes are for any of
9 the patients that were prescribed an opioid
10 medication by any of the doctors called upon
11 in the call notes you cited, correct?

12 MR. LOESER: Objection. Form.

13 THE WITNESS: As I mentioned
14 before, I did not have any of the data
15 that linked any of these particular
16 patients to their -- sorry, any of
17 these comments to particular
18 physicians, nor their patient or
19 patient outcome, that's correct.

20 QUESTIONS BY MR. TAM:

21 Q. So you can't identify any
22 specific prescription for a Purdue opioid
23 medication that a doctor in Cuyahoga County
24 or Summit County wrote because of anything
25 Purdue said or did, can you?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: My opinion was,
3 again, built on a broader view that
4 misleading statements by Purdue sales
5 representatives to influence
6 prescribing practices of physicians
7 throughout the United States,
8 including Ohio, was a driving force in
9 the overprescription of opioids,
10 leading to harm.

11 QUESTIONS BY MR. TAM:

12 Q. Doctor, if you could please
13 focus on my question.

14 You can't identify any specific
15 prescription for a Purdue opioid medication
16 that a doctor in Cuyahoga or Summit County
17 wrote because of anything Purdue said or did,
18 an you?

19 MR. LOESER: Objection. Asked
20 and answered.

21 THE WITNESS: Again, I do not
22 have the data that linked a specific
23 comment, a physician, to a particular
24 prescription or outcome.

25 Was that your question?

1 QUESTIONS BY MR. TAM:

2 Q. So the answer to my question
3 is, no, you can't identify any specific
4 prescription for a Purdue opioid medication
5 that a doctor in Cuyahoga or Summit County
6 wrote because of anything Purdue said or did?

7 MR. LOESER: Objection. Asked
8 and answered.

9 QUESTIONS BY MR. TAM:

10 Q. Right?

11 MR. LOESER: Same objection.

12 THE WITNESS: It's the same
13 answer. No, I do not have the data
14 that links those circumstances.

15 QUESTIONS BY MR. TAM:

16 Q. And you can't identify a doctor
17 in Cuyahoga or Summit County who relied on
18 any of Purdue's marketing materials when
19 prescribing a Purdue opioid medication to his
20 or her patients, can you?

21 MR. LOESER: Objection. It's
22 outside the scope of his report.

23 THE WITNESS: Yeah, I have no
24 such data to link those events.
25

1 QUESTIONS BY MR. TAM:

2 Q. So you can't identify any such
3 doctor, correct?

4 MR. LOESER: Same objection.

5 THE WITNESS: I cannot identify
6 a particular doctor beyond the concern
7 that they're being influenced based on
8 a lack of scientific evidence.

9 QUESTIONS BY MR. TAM:

10 Q. But again, you can't identify
11 any specific doctor in Cuyahoga or Summit
12 County?

13 A. That's correct.

14 MR. LOESER: Same objection.

15 QUESTIONS BY MR. TAM:

16 Q. Are you aware that Purdue has
17 never done direct-to-consumer advertising for
18 OxyContin?

19 A. My understanding of product
20 information that I reviewed for the report
21 included medications for the treatment of
22 chronic noncancer pain that appeared to me to
23 be directed at patients -- directly at
24 patients.

25 Q. Can you cite to a specific

1 OxyContin promotional material that you think
2 was directed to consumers?

3 A. As I recall -- if you can just
4 give me a moment -- that there was a number
5 of marketing materials, but one stands out is
6 the so-called Spanos video, Spanos video.
7 And I believe, as I recall, that that video
8 was targeted to -- directly to patients, as I
9 recall.

10 Q. Do you know whether any doctor
11 in Cuya -- let me strike that.

12 Do you know whether anyone in
13 Cuyahoga County or Summit County ever saw
14 those videos that you're referring to?

15 A. Again, that was not within the
16 scope or the depth of marketing review. I'm
17 not aware of -- I cannot confirm that any
18 people viewed that video in Cuyahoga County.

19 Q. Do you have any evidence that
20 the use of those videos led to any instances
21 of abuse of opioids in Cuyahoga or Summit
22 County?

23 MR. LOESER: Objection.

24 Outside the scope of his report.

25 THE WITNESS: I have no

1 evidence that directly links that
2 county to that particular marketing
3 material.

4 QUESTIONS BY MR. TAM:

5 Q. And you don't know whether any
6 doctor in Cuyahoga or Summit County relied on
7 those videos when prescribing a Purdue opioid
8 medication to his or her patients, do you?

9 MR. LOESER: Objection.

10 Outside the scope of his report.

11 THE WITNESS: Again, I have no
12 evidence that would support that.

13 I'm sorry, I lost track of your
14 statement or question.

15 QUESTIONS BY MR. TAM:

16 Q. You don't know whether any
17 doctor in Cuyahoga or Summit County relied on
18 anything in those videos when prescribing a
19 Purdue opioid medication to his or her
20 patients, do you?

21 MR. LOESER: Same objection.

22 THE WITNESS: I do not.

23 QUESTIONS BY MR. TAM:

24 Q. And are you aware that those
25 videos were no longer distributed as of July

1 2001?

2 MR. LOESER: Objection. Calls
3 for speculation.

4 THE WITNESS: I did not know.

5 QUESTIONS BY MR. TAM:

6 Q. You cite to the 2003 GAO report
7 in your report, right?

8 A. That has been referenced in
9 various ways in the report.

10 Q. If you turn to page -- sorry,
11 paragraph 76 of your report?

12 A. 76?

13 Q. Yes.

14 A. Okay.

15 Q. So in paragraph 76, one of the
16 advertisements you single out for Purdue is
17 this ad that says in part, "There Can Be Life
18 with Relief."

19 Do you see that?

20 You'll have to turn the page,
21 actually. Paragraph --

22 A. Oh, okay.

23 Q. Do you see that?

24 A. Yes, I do.

25 Q. If you turn back to the prior

1 page, you say that this is a 2006 ad?

2 A. That is what's written here in
3 the document.

4 Q. What is your basis for that
5 assertion?

6 A. As I recall, review of the many
7 documents included brochures, and there was,
8 again, an attempt to pull out examples that
9 linked -- pardon me -- particular phrases
10 with an image. That's my recollection.

11 Q. What's your basis for saying
12 that this is an ad from 2006?

13 MR. LOESER: Objection. Asked
14 and answered.

15 THE WITNESS: I don't recall
16 the details, other than I, at the
17 time -- well, I can only speculate
18 that somewhere in this review there
19 was a link of that date with that
20 image in some of the reviewed
21 materials.

22 QUESTIONS BY MR. TAM:

23 Q. Are you aware that this ad was
24 withdrawn in December 2002?

25 MR. LOESER: Objection. Form.

1 THE WITNESS: I was not aware
2 of that.

3 QUESTIONS BY MR. TAM:

4 Q. Were you aware that the FDA
5 sent Purdue a warning letter about this
6 advertisement in 2002?

7 MR. LOESER: Objection. Form.

8 THE WITNESS: I was aware that
9 the FDA sent warning letters to Purdue
10 about misstatements in their marketing
11 materials. The chronology of that, I
12 can't recall.

13 QUESTIONS BY MR. TAM:

14 Q. Are you aware that in response
15 to that warning letter Purdue took corrective
16 actions?

17 MR. LOESER: Objection. Form.

18 THE WITNESS: I understand that
19 in response to the letter that Purdue
20 made certain changes in their
21 marketing and withdrew certain
22 materials.

23 QUESTIONS BY MR. TAM:

24 Q. Are you aware that Purdue
25 issued a corrective promotional piece in

1 response to the FDA's warning letter?

2 A. I'm aware that Purdue responded
3 to the request to withdraw certain marketing
4 materials and claims.

5 Q. But you're not aware of any
6 corrective advertisements?

7 A. I'm not aware of that.

8 Q. Since 2002 are you aware of any
9 warning letter that Purdue -- let me ask that
10 again. Strike that.

11 Since 2002, are you aware of
12 any other warning letter that the FDA sent to
13 Purdue about its marketing of OxyContin?

14 MR. LOESER: Objection. It's
15 outside the scope of his report.

16 THE WITNESS: Yeah, that's
17 beyond the scope of my report. I have
18 no recollection of review of a
19 document that would support that.

20 QUESTIONS BY MR. TAM:

21 Q. But you said you're aware of
22 letters from the FDA to Purdue, right?

23 A. Broadly. The principal -- I'm
24 aware of a letter that requested Purdue to
25 make -- or defend certain marketing claims.

1 That's what I'm aware of. And then you --
2 sorry, so that's --

3 Q. You understand that marketing
4 materials from a pharmaceutical company get
5 submitted to the FDA, right?

6 MR. LOESER: Objection. It's
7 outside the scope of his report.

8 THE WITNESS: I believe that
9 within the scope of my report, the
10 utility of reviewing these various
11 materials was an intent to provide
12 examples. A more in-depth review of
13 marketing materials and their impact,
14 I believe, is left for other experts
15 in this area.

16 QUESTIONS BY MR. TAM:

17 Q. Do you have an understanding as
18 to whether the FDA has oversight over
19 pharmaceutical marketing?

20 MR. LOESER: Objection. Form.

21 THE WITNESS: I am aware that
22 the FDA has some oversight over
23 marketing materials; however, I also
24 know, based on my review of the
25 literature, that they have a

1 monumental job where the amount of
2 materials submitted dwarf the staff to
3 adequately review them, as I believe
4 mentioned in the Van Zee paper.

5 QUESTIONS BY MR. TAM:

6 Q. You agree that OxyContin has
7 always been and is currently FDA approved for
8 12-hour dosing, right?

9 MR. LOESER: Objection. Form.

10 THE WITNESS: I understand
11 that's the approval, that's correct.

12 QUESTIONS BY MR. TAM:

13 Q. You refer to the Purdue 2007
14 guilty plea in your report, right?

15 A. That's correct.

16 Q. And you refer to the Agreed
17 Statement of Facts?

18 A. What page are you on?

19 Q. I'm just asking generally. I'm
20 not asking about a specific statement.

21 A. Well, without me --

22 Q. Let me ask this --

23 A. -- finding that document, it's
24 hard for me to encompass broadly the intent
25 of your question.

1 Q. Do you recall whether you
2 reviewed the Agreed Statement of Facts?

3 A. I do remember reviewing at
4 least part of the Statement of Facts. I --
5 at this moment I'm not sure I recall I
6 reviewed the entire document or I was given
7 the entire document.

8 Q. You don't know whether any
9 doctor in Cuyahoga or Summit County was
10 called upon by any of the managers or sales
11 reps at issue in the guilty plea, do you?

12 MR. LOESER: Objection to form.
13 Outside the scope of his report.

14 THE WITNESS: I -- again, I do
15 not have data or elements that would
16 link specifically the Purdue
17 statements with Cuyahoga County or
18 Summit County.

19 QUESTIONS BY MR. TAM:

20 Q. Are you aware that in 2007
21 Purdue entered into a corporate integrity
22 agreement?

23 A. I'm not aware of that.

24 Q. You don't know what the
25 corporate integrity agreement required of

1 Purdue?

2 A. I have not read about a
3 corporate integrity agreement from Purdue.

4 Q. So it's not something you
5 considered in forming your opinions in this
6 case, right?

7 A. That's correct.

8 Q. If you turn to Exhibit C in
9 your report.

10 A. Okay.

11 Q. All the documents you cite in
12 Exhibit C are from 2001 or earlier, right?

13 A. So sorry, I was distracted.
14 What were the dates you said?

15 Q. 2001 or earlier.

16 A. That's what -- yes, that's what
17 it looks like.

18 Q. And these were all internal
19 Purdue documents and e-mails, correct?

20 A. That's my understanding.

21 Q. Do you know of any affirmative
22 misstatements by Purdue related to the
23 relevant potencies of OxyContin and morphine
24 that went to a physician in Summit or
25 Cuyahoga County?

1 MR. LOESER: Objection. Form.
2 Outside the scope of his report.

3 THE WITNESS: Sorry, is the
4 quest -- I guess -- sorry, could you
5 repeat the question one more time,
6 please?

7 QUESTIONS BY MR. TAM:

8 Q. Yeah.

9 Do you know of any affirmative
10 misstatements by Purdue related to the
11 relative potencies of OxyContin and morphine
12 that went to a doctor in Summit or Cuyahoga
13 County?

14 MR. LOESER: Same objection.

15 THE WITNESS: I do not, again,
16 have data that would link such
17 statements directly to a particular
18 physician in those counties.

19 QUESTIONS BY MR. TAM:

20 Q. You've read the OxyContin
21 label, right?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: I have reviewed
24 the OxyContin label -- labeling, yes.

25

1 QUESTIONS BY MR. TAM:

2 Q. Do you recall reviewing the
3 2001 OxyContin label which had a box warning?

4 A. I'm aware that OxyContin is
5 label -- has a box warning. I can't recall
6 in terms of how that box warning may have
7 changed over time or how the 2001 versus any
8 current box warning may look.

9 Q. Are you familiar with the group
10 known as Physicians for Responsible Opioid
11 Prescribing?

12 A. I am aware that they exist.
13 I've not had any direct interactions with
14 them.

15 Q. Are you aware that in 2012 they
16 petitioned the FDA to change the labeling for
17 opioid medications?

18 A. I was not aware of that.

19 Q. And so you wouldn't have been
20 aware of the FDA's response to that petition
21 in 2013?

22 MR. LOESER: Objection. Form.

23 THE WITNESS: I don't recall.

24 QUESTIONS BY MR. TAM:

25 Q. Do you know what OxyContin's

1 market share of the overall prescription
2 opioid market is?

3 A. What percentage it is in the
4 overall market, I don't know. I don't want
5 to guess, but I don't know what it is.

6 Q. Do you know what Purdue's
7 marketing budget for OxyContin was from year
8 to year?

9 A. What I do know is that early on
10 in the release of -- promotion of OxyContin
11 within the report, there was evidence that
12 within initial -- approximately five or six
13 years there was something in the range of
14 \$200 million focused on promotional
15 materials.

16 Q. Did you compare Purdue's
17 marketing budget for OxyContin for the
18 marketing budgets -- strike that. Let me ask
19 it again.

20 Did you compare Purdue's
21 marketing budget for OxyContin with the
22 marketing budgets of other similar
23 medications?

24 A. I have not.

25 Q. Have you done any research to

1 determine whether Purdue's marketing
2 expenditures increased the market share of
3 OxyContin?

4 MR. LOESER: Objection. Form.

5 THE WITNESS: I'm just aware
6 that with the introduction, of course,
7 of OxyContin and its marketing
8 campaign that there was a dramatic
9 increase in the prescribing for
10 OxyContin after 1996.

11 QUESTIONS BY MR. TAM:

12 Q. 1996 is when OxyContin was
13 first introduced, right?

14 A. That's correct, yeah.

15 Q. Have you done any research to
16 determine from year to year whether Purdue's
17 marketing expenditures increased the market
18 share of OxyContin?

19 MR. LOESER: Objection. Form
20 and outside the scope of his report.

21 THE WITNESS: Yeah, again, that
22 was outside the scope of my report. I
23 have not conducted such a study.

24 MR. LOESER: Counsel, I think
25 you're down to about five minutes,

1 just in case you're not tracking every
2 second.

3 QUESTIONS BY MR. TAM:

4 Q. One of your opinions is that
5 Purdue funded pain-related medical societies,
6 right?

7 A. Just a minute. I'll -- right.
8 I believe that was supported by reference to
9 the McCaskill report, the influence of
10 opioid -- pharmaceuticals, including Purdue,
11 to fund various medical education and
12 societies for -- yes, that's correct.

13 Q. Beyond evidence of funding,
14 have you seen any evidence that Purdue
15 controlled or dictated the content of any
16 statement or publication by a pain-related
17 medical society?

18 MR. LOESER: Objection. Form.

19 THE WITNESS: I have not -- in
20 my review of the documents, I've not
21 had any documents that particularly
22 make a link that -- well, I would just
23 say this: that I don't know. I have
24 not had the documents that may have
25 the depth and breadth of all the

1 various medical societies or
2 foundations that provided -- were
3 provided with funding.

4 QUESTIONS BY MR. TAM:

5 Q. I'm only asking about the
6 evidence you've seen.

7 So have you seen any evidence
8 that Purdue controlled or dictated the
9 content of any statement or publication by a
10 pain-related medical society?

11 MR. LOESER: Objection. Asked
12 and answered.

13 THE WITNESS: I've not reviewed
14 any such evidence in the preparation
15 of my report.

16 QUESTIONS BY MR. TAM:

17 Q. You've not seen such evidence,
18 correct?

19 A. I have not seen such evidence.

20 Q. Have you seen any evidence that
21 Purdue controlled or dictated the content of
22 any statement or publication by a so-called
23 key opinion leader?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: Again, although

1 I've not seen any data, I'm aware of
2 literature that has linked the
3 influence of funding by pharmaceutical
4 industry to the changing of key
5 opinion leaders' opinions on opioids,
6 but I do not have any evidence that
7 I've reviewed in that regards.

8 QUESTIONS BY MR. TAM:

9 Q. Sorry, I didn't mean to step
10 over you, so just to clarify.

11 A. Sure.

12 Q. You have not seen any evidence
13 that Purdue controlled or dictated the
14 content of any statement or publication by a
15 key opinion leader, have you?

16 MR. LOESER: Objection. Form.

17 THE WITNESS: I have not seen
18 any evidence that substantiates that
19 statement.

20 QUESTIONS BY MR. TAM:

21 Q. Have you seen any evidence that
22 Purdue controlled or dictated the content of
23 any CME it sponsored?

24 MR. LOESER: Objection. Form.

25 THE WITNESS: Again, based on

1 the literature review, there's been
2 strong associations, if not direct
3 relationship, of industry influence on
4 medical decision-making based on
5 influence of money, funding for these
6 or other -- providing other support to
7 their target audience, including down
8 to a piece of pizza.

9 QUESTIONS BY MR. TAM:

10 Q. But, Doctor, you have not seen
11 any evidence that Purdue controlled or
12 dictated the content of any CME it sponsored,
13 have you?

14 A. I have not seen such --

15 MR. LOESER: Objection.

16 THE WITNESS: I have not seen
17 such evidence.

18 QUESTIONS BY MR. TAM:

19 Q. Have you looked at any
20 agreements between Purdue and any entity or
21 organization that put on a CME?

22 A. I have not reviewed such
23 documents.

24 Q. Have you seen any evidence that
25 Purdue controlled or dictated the results or

1 publication of any research that Purdue
2 funded?

3 MR. LOESER: Same objection.
4 Form.

5 THE WITNESS: I don't recall.

6 MR. LOESER: Counsel, we're at
7 seven hours.

8 MR. TAM: How are we on time?

9 VIDEOGRAPHER: You just did
10 40 minutes.

11 MR. TAM: So I'll note that
12 there were a lot of speaking
13 objections today.

14 Are you going to cut me off
15 right now?

16 MR. LOESER: If you want to ask
17 one more minute of questions, that's
18 fine, but it's not because there's any
19 speaking objections. It's because
20 you've asked.

21 QUESTIONS BY MR. TAM:

22 Q. Are you aware that Purdue
23 submitted promotional statements and labeling
24 to the FDA that said OxyContin did not have a
25 ceiling dose?

1 MR. LOESER: Objection. Form.

2 THE WITNESS: Again, the scope
3 of my investigation and review of the
4 literature did not reveal any
5 documents that Purdue submitted for
6 approval with that wording about the
7 ceiling dose.

8 MR. LOESER: Counsel, one more
9 question and I think we're done.

10 THE WITNESS: I'm sorry, what?

11 QUESTIONS BY MR. TAM:

12 Q. But you have seen documents, as
13 part of your review and preparation of your
14 report in this case, where Purdue submitted
15 marketing -- its marketing materials to the
16 FDA, right?

17 A. I'm aware that they submitted
18 marketing documents. I can't recall whether
19 it included -- whether or not ceiling doses
20 was part of that; however, I certainly know
21 that within the call notes that Purdue
22 representatives repeatedly claimed there was
23 no ceiling dose for OxyContin.

24 MR. LOESER: Okay. I think
25 we're done.

1 MR. TAM: You cutting me off?

2 MR. LOESER: Your time is up.

3 MR. TAM: Anyone else have
4 questions?

5 MR. EHSAN: Are you going to
6 question the witness?

7 MR. LOESER: I'm not going to
8 question the witness.

9 VIDEOGRAPHER: Should we
10 conclude?

11 MR. TAM: Well, I'll just note
12 for the record that I think our time
13 was very limited today, but we are at
14 the seven-hour mark, but reserve our
15 rights to seek additional time.

16 MR. LOESER: Noted.

17 VIDEOGRAPHER: Okay. This
18 concludes the video deposition of Mark
19 Schumacher. We are now going off the
20 record, and the time is 7:14 p.m.

21 (Deposition concluded at 7:14 p.m.)

22 - - - - -

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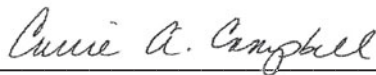
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CERTIFICATE

I, CARRIE A. CAMPBELL, Registered
Diplomate Reporter, Certified Realtime
Reporter and Certified Shorthand Reporter, do
hereby certify that prior to the commencement
of the examination, Mark A. Schumacher, M.D.,
Ph.D. was duly sworn by me to testify to the
truth, the whole truth and nothing but the
truth.

I DO FURTHER CERTIFY that the
foregoing is a verbatim transcript of the
testimony as taken stenographically by and
before me at the time, place and on the date
hereinbefore set forth, to the best of my
ability.

I DO FURTHER CERTIFY that I am
neither a relative nor employee nor attorney
nor counsel of any of the parties to this
action, and that I am neither a relative nor
employee of such attorney or counsel, and
that I am not financially interested in the
action.



CARRIE A. CAMPBELL,
NCRA Registered Diplomate Reporter
Certified Realtime Reporter
Notary Public
Dated: April 26, 2019

INSTRUCTIONS TO WITNESS

Please read your deposition over carefully and make any necessary corrections. You should state the reason in the appropriate space on the errata sheet for any corrections that are made.

After doing so, please sign the errata sheet and date it. You are signing same subject to the changes you have noted on the errata sheet, which will be attached to your deposition.

It is imperative that you return the original errata sheet to the deposing attorney within thirty (30) days of receipt of the deposition transcript by you. If you fail to do so, the deposition transcript may be deemed to be accurate and may be used in court.

ACKNOWLEDGMENT OF DEPONENT

I, _____, do
hereby certify that I have read the foregoing
pages and that the same is a correct
transcription of the answers given by me to
the questions therein propounded, except for
the corrections or changes in form or
substance, if any, noted in the attached
Errata Sheet.

Mark A. Schumacher, M.D., Ph.D. DATE

Subscribed and sworn to before me this
_____ day of _____, 20 _____.

My commission expires: _____

Notary Public

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